AUDIOVISUAL INSTRUCTION

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JANUARY 1958

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AUDIOVISUAL INSTRUCTION

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contents

4 **Can Film Replace the Teacher?**
Charles J. McIntyre

6 **Audio-Visual Problems in Large Group Instruction**
F. G. Macomber and James F. Adams

8 **Learning at Military Pace**
Perry B. Graybill

10 **A New Classroom for Reading**
Gertrude Whipple

12 **School Radio in Sweden**
Sten S. Allebeck

14 **Audio-Visual Aids for Self-Instruction**
Helen L. Allion

18 **The Scarborough Story**
Cecil E. Wilkinson

EDITORIAL COMMENT

30 **AV in a Decade of Decision**
Anna L. Hyer

DEPARTMENTS

2 **Editor's Notebook**

16 **Convention News**

22 **Within the DAVI Family**

24 **Looking at New Literature**

26 **Materials and Equipment**

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the EDITOR'S notebook

IN NOVEMBER the national office had a letter from Walter J. Mars, dean of instruction at Lyndon Teachers College, Vermont, stating that he was tired of being one of two DAVI members in the state. Several weeks later the morning mail brought us 11 new members from Vermont, thanks to the efforts of Mr. Mars. Congratulations!

• • •

I had the privilege of attending a TV open house at the Walter Reed Army Medical Center recently. For several years, Walter Reed has been using both broadcast and closed-circuit television very effectively in training and education programs. More recently facilities have been added for making color kinescopes. The system at Walter Reed employs the first color TV equipment designed specifically for medical instruction and demonstration purposes. The televised "armchair" tour of the closed-circuit TV facilities was most interesting, as were the demonstrations of the kinescopic recorder and live surgical procedures performed in the operating room.

WALDEMAR GJERDE

Waldemar Gjerde, audio-visual specialist at Iowa State Teachers College, Cedar Falls, died following a heart attack December 9. Mr. Gjerde was president of the Audio-Visual Association of Iowa, a member of the DAVI Board of Directors and Editorial Advisory Board, and participated regularly in the Okoboji Conference. He will be missed in the national organization, and in Iowa where he gave leadership to many of the programs promoted through the state organization. The editorial staff of AVI has added cause to note Mr. Gjerde's passing. We appreciated his genuine interest in the magazine, which he evinced through suggestions, occasional criticism, and, from time to time, a pat on the back.

I hope all of you are on mailing lists for information on educational programs from such networks as NBC and CBS. Many excellent materials are appearing on the commercial stations these days. On December 1 CBS started a two-year science TV series called "Conquest." Among the many NBC projects has been the cooperative one with the Educational Television and Radio Center whereby weekly educational programs were made possible in these subject areas: International Geophysical Year, World Resources and Civilizations, Mathematics, Greek Mythology and Art, and American Government. One quick way of keeping up with educational programs on commercial stations is to check the Listenables and Lookables page in *Scholastic Teacher*.

• • •

I hope DAVI members are giving attention to the King-Jenkins Tax Deduction Bill in meetings and when talking to friends—or better yet, contacting their Congressmen. This is NEA's number one priority among legislative activities for the current Congressional session. If passed, Bill HR 4662 will permit teachers to deduct from Federal Income Taxes up to $600 a year for books, equipment, and travel expenses. Teachers at present are denied these occupational deductions available to other groups.

• • •

The Convention of the National Association of Educational Broadcasters in St. Louis last fall was one of the best NAEB meetings that I have had the privilege of attending. About 250 persons were present including a sizable number of DAVI members. I was particularly proud of the support that the people from the audio-visual department of the St. Louis schools gave to the convention. Harold C. Hand spoke at the opening general session on the process of change in public education. He defined his purpose as helping broadcasters avoid some of the pitfalls frequently associated with social change which educators tend to overlook. Social change is never easy, according to Dr. Hand who commented that the problems are something like those involved in moving a cemetery. They consist of a few live persons trying to move a great many dead ones, and the live ones usually find the dead have many friends.

Another interesting general session was devoted to broadcasting for world understanding. Brief presentations were made by Keith Engar, 1956 Fullbright Scholar to France (it may interest you to know that there are six such Fulbright Scholars each year); Chloe Fox, executive director of the Broadcasting Foundation of America, a non-profit organization whose purpose is to bring about an exchange of recordings on tape and film between the United States, Europe, and the Far East; and Edwin Randall, American Friends Service Committee. Study groups were scheduled throughout the convention under the general heading, "A Look at Ourselves with Attention to . . ." I was impressed by the support and interest shown by the industrial group. An informal reception with refreshments was given by the St. Louis Convention broadcasting stations, and NBC was host to a banquet and program. NAEB has an extensive program including a tape network programming service, placement and consultation service, and the distribution of grants-in-aid financed by foundations. During last year the latter totaled $43,362. Burton Paulu, Station KUOM, University of Minnesota, was re-elected presidentof NAEB and Jack McBride, Station KUON-TV, University of Nebraska, was elected vice-president. Other officers are Haskell Boyter, secretary and Robert Coleman, treasurer.

• • •

Kitty Welch has taken over several responsibilities in the national office formerly carried out by your present executive secretary. Kitty is serving as managing editor of *Audio-Visual COMMUNICATION REVIEW*. (As executive secretary I am a member of AVCR's editorial board.) Kitty is also carrying the major responsibility for DAVI's work with the Audio-Visual Commission on Public Information.

• • •

All of you will probably want to read the report, *Education in the*

USSR, which can be had for $1.25 from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. —A. L. H.

New Cover

No doubt many of you will need to look twice this month as you pick a somewhat austere looking copy of AVI out of the morning's mail. A change in format is always a shock to faithful readers who have become attached to a familiar design, imperfect though it may be. Despite some anticipated protest, the editorial staff has been campaigning for a cover change for the past six months—the best reason being that the busy design on the old cover plus the odd shape required for photos and line drawings made selection of cover art difficult. Furthermore, we are accessible here in the national office to the opinion of various typographers, artists, and graphic arts specialists. Their advice has been constant and unanimous—"Simplify your cover design."

Choice of a new cover was left by the Interim Editorial Committee last spring to the new Editorial Board which met for the first time November 20 in Detroit, where William C. Miller made arrangements for meeting and lunch facilities in the Detroit County-City Building. After deliberating half a day, the new Board gave instructions for the present cover design, which we hope will please everyone. The photo, by AP, was taken at the IBM Vanguard Computation Center in Washington after the advent of Sputnik I.

Board members meeting in Detroit with the editorial staff were Floyde E. Brooker, William C. Miller, Marie McMahan, Beatrice Simmons, J. J. McPherson, Ford Lemler, Horace Hartsell, and Robert Kilbourn. Absent members who had been previously contacted by mail and who sent their recommendations were William Gnaedinger, Edith Davidson, Harold W. Coman, Bea Olmstead, and Carolyn Guss.

Next Month

Carrying out the February theme on audio programs, AVI will feature articles on language laboratories, aural imagery, magnetic tape, and a survey article on recordings and radio (use and preference). Gale Adkins, chairman of TV Research, University of Kansas, writes on the latter; Ralph Hall, Kent State University, on magnetic tape; and Marilyn J. Hoogs and James H. Cole, Audio Education, Inc., on aural imagery. Articles on language programs come from the pens of Donald Lloyd, Wayne State University, and V. V. Kameneff, Supreme Headquarters Allied Powers Europe. Paul Cashman, University of Minnesota, writes on listening skills.

About the Authors

Charles J. McIntyre, chief of the Educational Television Branch of the Office of Armed Forces Information and Education, received his PhD in psychology from Penn State where he later became a member of the staff of the Instructional Film Research Program and worked on the closed-circuit TV facility and research project.

F. G. Macomber has a background of public school teaching and administrative experience and has been dean of education at Drake and Miami Universities. He is currently associate provost of Miami University and director of the Miami Experimental Study in Instructional Procedures.

James F. Adams, research associate in the Miami Experimental Study, was formerly assistant professor of psychology at Whitworth College, and, before that, on the staff of the Testing Bureau, Temple University.

Perry B. Graybill is audio-visual educational advisor for the Air University, Maxwell Air Force Base. During the war and until his present position he served in the Training Aids Section, Bureau of Naval Personnel.

Before coming to Detroit in 1936 **Gertrude Whipple** was supervisor of the elementary curriculum section in the Los Angeles schools. Now supervisor of language education in the Detroit public schools, she is the author of more than 70 books and articles.

Sten S. Allebeck, whose manuscript came to us in English and needing very little editing, has been working with school broadcasting in Sweden for many years.

Helen L. Allion is assistant director of the National Home Study Council in Washington, D. C. She has a background in test development, personnel, public school teaching, adult education, and research. She was formerly with the Division of Adult Education Service, NEA.

For **Cecil E. Wilkinson,** see page 18.

LaVerne Miller, who translated and reviewed the new Austrian AV journal (page 25), is instructor in world literature at the University of Maryland.

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Art Decoration: page 21, courtesy Coronet Films.

DAVI Notes

What Research Says to the Teacher About Audio-Visual Instruction, No. 14 in the What Research Says to the Teacher series is available for 25 cents from the NEA Research Division. Paul Wendt, a member of the DAVI Research Committee prepared the copy, and the Research Committee acted as reviewers of the manuscript.

• • •

The second New England Leadership Conference, patterned on the Okoboji Conference and co-sponsored by DAVI, will be held in Boston January 30-February 1. The conference theme is "The Role of AV Materials in the Improvement of Instruction"; co-chairmen are Kelsey Sweat and Robert P. Danilowicz.

• • •

DAVI has been asked again this year to co-sponsor a major section of the National Convention of the Department of Elementary School Principals. The meeting will be in Philadelphia March 23-26. DAVI has also been asked to send three representatives to each of six regional conferences sponsored by the National Commission on Teacher Education and Professional Standards. Conference sites for 1958 are Hartford, Washington, New Orleans, Chicago, Denver, and Portland. The theme: Teacher Education Program — Basic Principles and Issue.

can film replace the teacher?

by Charles J. McIntyre

THE UNITED STATES Armed Forces Institute is an organization where ingenuity is necessarily the order of the day. USAFI provides educational materials and services for Armed Forces personnel wherever they may be stationed; learning must go on in isolated posts, at sea, and often where educated but untrained persons must take charge. Dr. McIntyre's description of the USAFI telecourses on these pages gives some idea of how the Armed Forces experiment to meet unique educational problems. The telecourses are a truly pioneering step, in that films are considered not as supplementary aids but as a possible teacher replacement.

The articles which follow describe other "audio-visual frontiers"—in the military, across the sea, with our new Canadian affiliate, and in large-group and individual instruction. The latter, these articles seem to indicate, is a growing trend in the attempt to circumvent the teacher shortage. If this is true, AVI is indeed happy to print on page 14 its first article on audio-visual aids applied to "home study" courses. Dr. Hyer, in her editorial, looks beyond today's frontiers into the troubled decade ahead, where, in the wake of Russian educational advances, she sees both turmoil and opportunity.

THE USAFI telecourse project represents an attempt to use motion pictures to supplement correspondence courses and to ameliorate the shortage of teachers for group study now being experienced by the Armed Forces — a shortage which we may be reasonably sure will grow substantially worse. We believe the telecourses will stimulate enrollment, improve achievement, and encourage completion of USAFI courses.

So far, five high-enrollment USAFI courses are involved: Beginning Algebra (two semesters), Practical English Usage (one semester), American History (two semesters), General Psychology (one semester) and the American Federal Government (one semester). Psychology and Government are college level courses; the others, high school. USAFI correspondence courses are usually divided into about 16 or 20 lessons per semester.

In general, we have produced a half-hour film related to each lesson. Thus each semester comprises about 16 half-hour films. The instructors are high school and college teachers with experience in successful film or television teaching. Each half-hour is devoted to explaining, elaborating upon, and discussing the most significant and difficult aspects of the related lesson. Visual aids are used extensively when appropriate, but we have avoided the temptation of using visuals for their own sake.

The films are all kinescopes. That is, they are motion pictures taken from a special television tube. The picture quality of a kinescope is not as good as that of a motion picture. On the other hand, it is as good as the picture on most home television sets which millions of Americans customarily watch for hour upon end. Hence, the quality is certainly adequate for either conventional motion picture projection or for showing over the stations of the Armed Forces TV network. The latter is a network of 22 low-power TV stations located at various isolated military installations outside of the Continental United States which primarily broadcast kinescopes of commercial TV shows.

The telecourse project has its roots in the field of educational television. Not only have we borrowed our techniques from ETV, but much more importantly, we have derived from it our hope and expectation of ultimate success.

It has been recognized for a relatively long time that people can and do learn from motion pictures. The military services have used films extensively for indoctrination and training. Civilian educators probably have not used films quite as systematically but they, too, have used them extensively at all grade levels. For the most part, however, we think of the course-related films used in this tradition as enriching or supplementary. They have been used to teach some aspects of a course, but until very recently it was unthinkable to suggest that films alone might substitute for that portion of the course normally taught by an instructor.

In my view there were two main reasons for this, both of them at least partially invalidated by educational television. One reason was cost. Applying the traditional concepts of film production, the cost was prohibitive. Using television teaching techniques, however, we can obtain 30 half-hour film sessions for about the cost of a

single half-hour educational film produced conventionally. Hence, costs, while still a relevant consideration, are no longer prohibitive.

An even more important factor seemed to be that educators had simply not realized that you can separate the instructor from his students, whether by a television tube or a motion picture screen, and still obtain reasonably good results.

There are some who still do not think this possible, but their number is shrinking before a tide of research evidence which shows that, in terms of those elements of a course that we usually measure, TV students generally do at least as well as students in classes conventionally taught. This result has been obtained with a wide variety of subject matters and at many academic levels. Nor is there any reason to believe that the result would be different when the instruction is projected on a motion picture screen rather than through a television tube.

We may ask if there are intangible benefits of education which a student loses by taking filmed or televised instruction. We don't know. Educators frequently do not agree on what these intangibles are, and testing specialists have not developed convincing measures of those that are agreed upon. The answer, I suspect, depends on a subtle interaction of student, teacher, subject matter, and method. However, for the Armed Forces the question is essentially irrelevant because these films are intended for the correspondent student who had no instructor before, or to replace an instructor who by his qualifications and in his working situation would not be expected to project many of these subtle and intangible benefits of education anyway.

Therefore, when we find that students in Chicago who take a course by television do as well on a common final examination as students regularly enrolled in the classroom, and when we find these results duplicated at Penn State, Hagerstown and Pittsburgh, to name just a few of the outstanding examples, we may expect that students viewing the same kind and quality of instruction projected on a motion picture screen will do equally well.

An experiment is now taking place aboard 11 large aircraft carriers in which the instruction is by film on six and by such instructors as would normally be available on five; that is, by individuals who majored in the subject taught but who may or may not have had teaching experience. Each ship was requested to offer any or all three courses—algebra, English or history. Nearly all of the vessels involved have reported that current operating problems make it difficult to establish and maintain classes. Nevertheless, it is interesting to note that only one of the ships with instructor-taught classes has completed a course, while only one of the ships with film-taught classes has failed to complete one. Moreover, the film-taught groups were not able to start as soon as those taught by instructors. One ship, film-taught, had as many as 40 or 50 students in each of the three courses, with 50 to 60 percent taking the final test. Three of the ships commented favorably upon the quality and conception of the telecourses and requested that additional courses be prepared.

The same three courses were offered over the Armed Forces television station in Panama. The response there from a number of sources including the civilian education advisor and the superintendent of schools has been extremely gratifying. Also, we know, as a result of giving subject-matter examinations to a random sample of the base population before and after the courses were televised that significant learning occurred.

Preliminary analysis of the data indicates that in one course—English—about 20 percent of the population watched enough programs to enable them to significantly improve their average test scores. The comparable percentages were lower for algebra and history—about five and ten percent respectively. Even this is not a mean educational accomplishment when one realizes that the projected audience numbered thousands. The complete results of this experiment including an analysis of viewer characteristics will be reported later.

The apparent success of the telecourses when used over the Panama station was not repeated at several other stations. The reason is easily traced to differing command conceptions of the role of the Armed Forces television stations. In Panama, the station is customarily used for information, education and training, as well as for entertainment. At other installations it is looked upon almost entirely as an entertainment device and the generally negative comments from those stations centered around the fact that the programs did not appeal to a majority audience.

Actually, one survey indicated that reasons for not watching the courses are associated predominantly with lack of time or suitable viewing conditions rather than with an aversion to education as such or to the courses offered. In any case, the success of the telecourse project does not stand or fall upon its reception by the television stations since they serve only a fraction of the total Armed Forces personnel. However, the failure on the part of some of the Armed Forces stations to capitalize upon their educational potential is disappointing and indicates a necessary area for internal education and promotion.

We have only recently announced the world-wide availability of the telecourses. Our experience thus far is that our supply and printing capability can not keep up with the demand. Undoubtedly, the recent budgetary cuts for Armed Forces education have helped stimulate the demand beyond our original expectations. It seems now that most of this year's budget, which was to include the production of new courses, will have to be spent on additional prints of the courses already produced. Also, it is likely that some sort of priority among potential users will have to be established. Apparently many among the education personnel at the operating level in the Armed Forces already think that the telecourses are going to be a valuable adjunct to their program.

What of the future of this project? In the first place, a common experience with educational television is that one begins at about the lowest point in utilization and acceptability. These things seem to improve with time, rather than to deteriorate. Students have to learn to learn from this medium. They can and will. Education personnel have to be convinced that their students can learn this way. Our experience so far indicates that as they do, the telecourses will progress from a "project" into an integral part of Armed Forces education.

Audio-Visual Problems in Large Group Instruction

F. G. Macomber and James F. Adams

TELEVISED INSTRUCTION has accentuated the audio-visual problem, both because of the importance of teaching aids to TV instruction and because it is more difficult to produce suitable and effective aids for this medium. The following illustrations, some hypothetical, but all realistic, will help to point up the audio-visual problems unique to televised teaching.

• Professor X prepared a model of a cell encased in translucent plastic. It was an excellent visual aid for regular classroom use, and contrasting parts showed up well at a considerable distance. However, when televised, the loss of detail and distortion caused by the translucent material made it an unsatisfactory aid.

• Captain B was using a dark blue model of a bomber to illustrate principles of airplane flight in his televised class in air science. The color contrast between the model and the Captain's summer suntans was such that a highly satisfactory picture was created on the receiving sets. Then came October 15, and the Captain dutifully changed to the winter uniform of air force blue. His uniform photographed black, as did the dark blue of the model. As a result, the airplane merged with the uniform in such a manner as to be almost totally indistinguishable on the receiving sets, even though there was a reasonably good contrast when viewed directly.

• Professor Y has developed an "individualistic" form of handwriting, as have many professors, and takes some pride in his penmanship. The fact that it is rather illegible is no great handicap in a small class and gives him something to joke about. Ultimately, the students learn to read it unassisted. The same writing on television, with space limitations and "spot viewing," results not only in loud wails from the students, but in some cryptic remarks that they wish professors would learn to write. Professor Y is now practicing his handwriting.

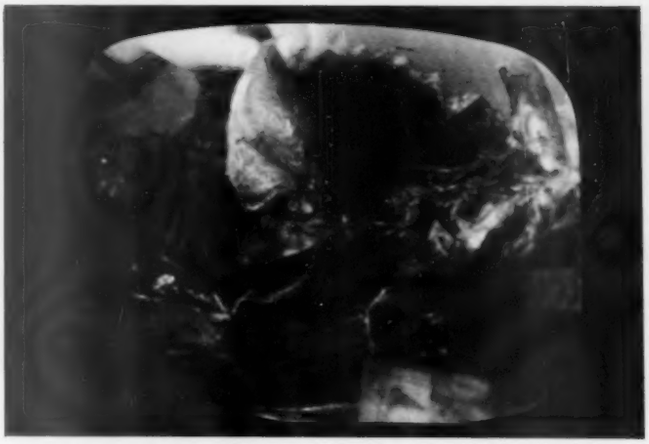
• Professor Q is an excellent lecturer to large groups, and is able to develop rapport with his students. He has quit using the blackboard because students in the back of the large lecture room cannot read the writing. His subject is quite technical, but he has developed a "give and take" method of teaching which secures considerable student questioning on difficult points, including statistical interpretations. On television Professor Q is considered by his students to be lacking in warmth, and his lectures dry and difficult to understand. If he could use visual aids, they might assist materially in making his presentations more understandable to the students. More than this, his use of charts, graphs, slides, and animated cartoons, combined with regular use of the blackboard would give a "change of pace" which is highly desirable on television. There is no particular point in a student watching the screen if all he sees is the lecturer, although some variety may be obtained from different camera shots in the studio. Students find it more difficult to attend continuously to a TV lecture than to the same lecture delivered in person.

Readers of this journal are well aware of the values of audio-visual aids in teaching and most probably are proficient in the production of instructional materials and the use of equipment. Discussing this point seems like "carrying coals to Newcastle." However, while teachers at the elementary and secondary levels make considerable use of "visuals," the acceptance and use of these materials and equipment at the college level is very "spotty."

This is true because of several factors. Many, possibly most, college teachers in non-laboratory courses have had no training in the production and use of instructional materials and, consequently, confine themselves to the traditional use of books, the blackboard and, where applicable, maps. Few colleges have audio-visual departments capable of rendering full and immediate services with the exception of slides and films. It generally is necessary for the interested professor to beg, borrow, buy or make his own visuals. Slides and films, of course, may be obtained through a college rental service, provided the department concerned has money budgeted for this purpose. Many do not. It is generally believed that college students, being more mature than elementary and secondary students, are capable of abstract thinking without other than the conventional "visuals."

While the lack of adequate audio-visual services presents no insurmountable obstacle in the small discussion-type college class, it becomes a decided handicap in large group instruction, and particularly in televised teaching. Consequently, when the experimental study in large group instructional procedures was planned, provision was made for greatly expanded audio-visual facilities capable of meeting almost any reasonable demand for materials, equipment and

THE AUTHORS write that, since they are not audio-visual specialists, "it would be presumptuous indeed" for them to deal in detail with technical aspects of the production of instructional materials. They are however deeply involved in a study in large group instruction at the college level (The Experimental Study in Instructional Procedures at Miami University) and are convinced that the success or failure of large group instruction is closely related to the effective production of teaching materials.



Laboratory demonstration from instructor's and student's viewpoint. Note loss of definition which occurs in telecasting.

services. The size of the department was increased from two to six full-time staff members, the budget greatly increased, and equipment and space facilities added. In addition to slide and film rental, projection services and audio recordings, the department is now capable of making charts, graphs, vu-graph transparencies, models, mock-ups, maps and booklets—the latter by off-set printing.

A brief discussion of several problems resulting from large group instruction may prove interesting and possibly helpful.

Television presents some unique problems. For instance, color combinations when televised become shades of grey, with some colors becoming black. A whole new field of learning becomes a "must" for the graphics personnel engaged in making charts, graphs, and even slides for TV. The TV camera is sensitive to a more limited range of contrasts than is the human eye, and careful consideration should be given that visual aids are in fact both visible and aids.

"Shooting" the blackboard at an angle distorts the writing; therefore, instructors must learn to write without getting in front of it so that the camera can be at a right angle. Some instructors have already mastered the difficult trick of writing from the left side of the board in order that the arm will not hide a section of writing from the camera. The fact that only a limited area can be televised also necessitates a special blackboard technique if this conventional aid is to prove satisfactory.

Small objects and graphs may be blown up and large objects reduced by the camera. For instance, the beating heart of a frog can be magnified in great detail for the viewing rooms, or a large chart reduced to TV screen size; the latter, however, with considerable loss of definition. Making charts and graphs for TV becomes a special skill in itself. Charts made for regular classroom use generally prove unsatisfactory on TV.

The overhead projector, better known by the trade name of Vu-graph, has proven to be an exceptionally usable piece of equipment for large class instruction. One example will suffice. English 11, 12 for freshmen normally is taught in groups of 25 to 28. As part of the Experimental Study, several sections were doubled in size. It was difficult to place portions of themes on the board with large enough writing for all to see, and this was also time consuming. Themes now are turned in on Monday; selected ones then are transferred to vu-graph transparencies, available for class study on Wednesday.

Instructors also find the overhead projector excellent for lecture notes, spot quizzes, maps, and various forms or formats, and as substitutes for the blackboard. New equipment in the audio-visual department will soon make possible almost immediate service in making these and similar transparencies.

Geography generally has been taught in rather large lecture sections. This year at Miami University one large section is being taught through a map problem procedure. In order to do this it is necessary to have sketch maps of various kinds. Two members of the geography department spent two weeks on a pay status during the summer to sketch out desired maps, which were then reproduced through offset printing by the audio-visual department.

Instructors in several other courses were placed on a two-weeks workshop status in order that they might, among other things, develop special teaching aids for their courses in the Experimental Study. This is a practice to be recommended, provided adequate audio-visual services are available to transfer ideas into slides, transparencies, charts, etc. A number of audio-visual seminar meetings are contemplated for the very near future. All university instructors will be invited, regardless of participation in the Experimental Study. A similar type of seminar in evaluation was well attended last year.

In a series of recorded interviews conducted as a part of the Experimental Study, students have shown that they are very much aware of the type and quality of instructional aids used. Their comments have convinced the writers that more time and attention must be focused on the audio-visual area if adequate large group instruction is to be given in this day of increasing enrollments.

Learning at Military Pace

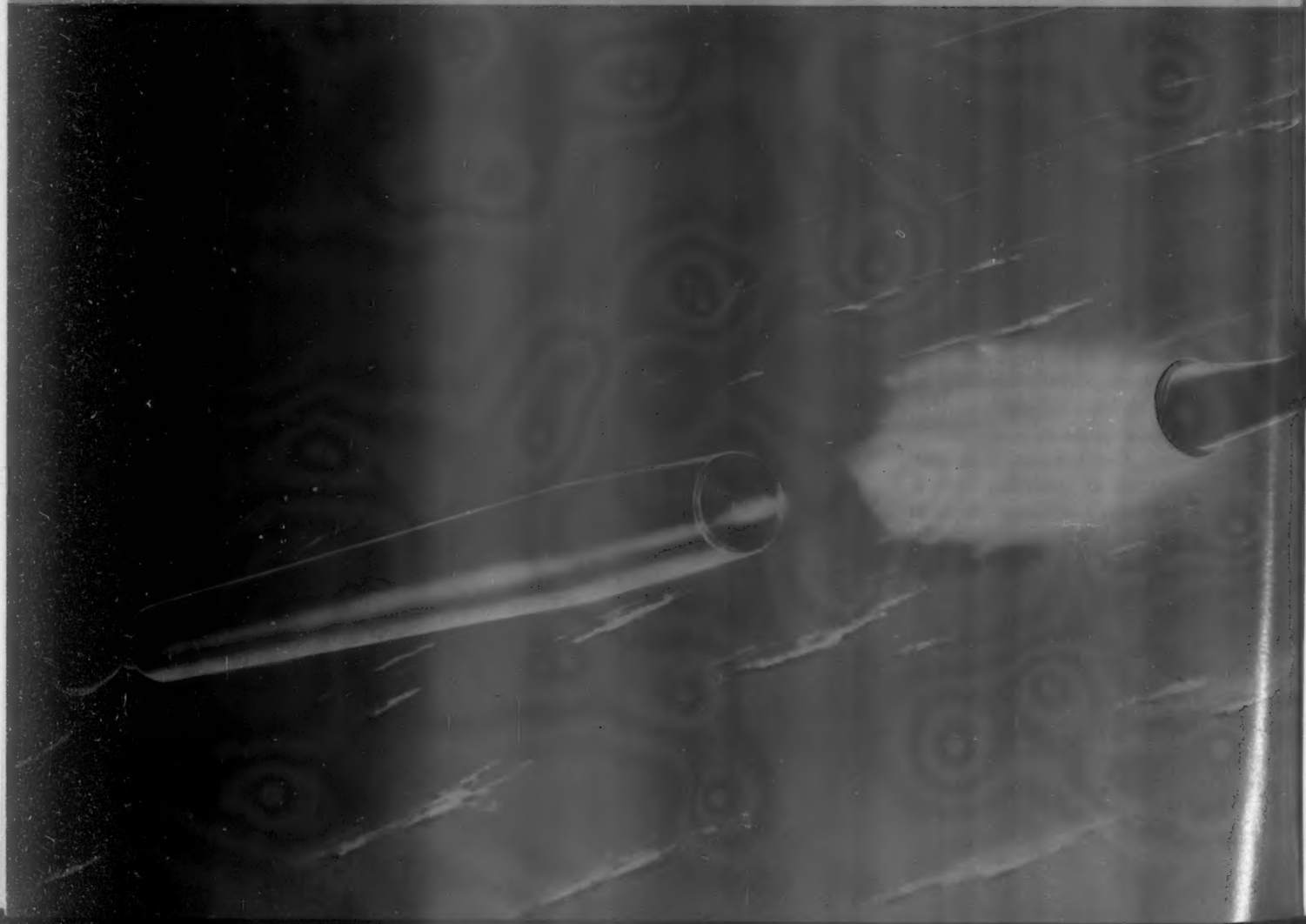
AV MEETS A CHALLENGE

by Perry B. Graybill

MILITARY education and training programs cannot afford the luxury of leisurely instruction. With few exceptions, military students are either on full pay or receiving government support. This places relentless pressure on educational programs to achieve the ultimate in effective instruction. Anything less is wasteful.

Even more impelling is the desperate pace set by government scientists and engineers to achieve and maintain military technological supremacy. Trained personnel must be ready to install, operate, and maintain new weapons of national defense simultaneously with their perfection. There can be no time lag here.

Where complex aids are required, their development and use must precede operational employment of the weapons. Where simple aids will produce the required result, less lead time is needed and failure to use these aids would be folly. That is why research in this area is so important. There is neither the time nor



money to spend on superfluous aids. Were there no subject-matter changes, the task would be greatly simplified, but there are constant changes. So, in this program audio-visual aids must be anticipated because there is no time to await normal procedures of supporting instruction.

Fortunately there is now a deep-rooted belief in the use of aids among seasoned military instructors. The experience in wartime training proved beyond doubt that static educational programs could not meet the urgent demands for mass training in an agonizingly short period of time. Therefore there is somewhat less need to propagandize the effectiveness of aids because the principle is well entrenched.

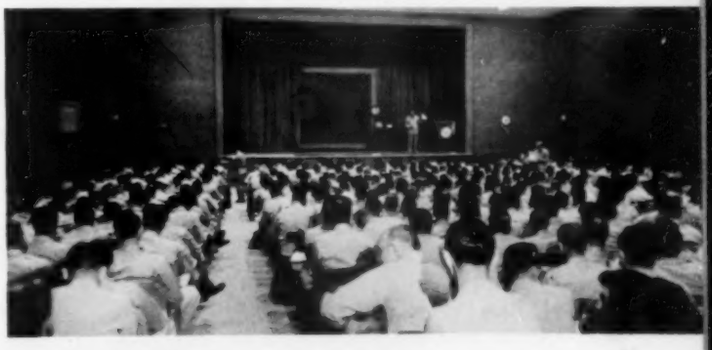
Immediately following the conflict, however, die-hard critics had a field day pointing out the deficiencies and exaggerated claims for a number of hastily devised aids that remained as relics of the emergency. This had the salutary effect of stimulating an evaluation of the whole military audio-visual program, more comprehensive than ever attempted before. Part of this evaluation was in the nature of quasi-research studies, the findings of which provided something better than mere educated opinion as guidelines for the more realistic program that has emerged.

In the military we have learned this lesson: With few exceptions, the most useful aids and ideas for aids are originated in the classroom or training environment. We have found, too, that "standardized" aids simply will not fill the bill for a large portion of the instructional program. They gather dust in many a school simply because they fail to present in an economical way concepts considered of prime importance by the instructor.

Moreover, participation in preparation is of tremendous worth in encouraging professional growth of the individual, even though in some instances the aid itself may be of less than lasting usefulness. The instructor who has become interested in the improvement of his presentation no longer begrudges time spent in preparation for his class. He has "caught the big fish" and is a confirmed fisherman from here on out. He will even urge others to follow his lead to the betterment of instruction.

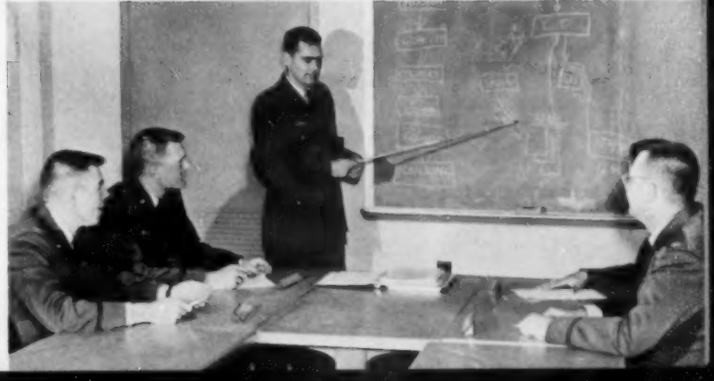
Thus, while the military still mass-produces a large number of aids, the trend is in the opposite direction, and locally prepared aids carry the biggest share of the teaching load. Military instructor-training programs emphasize ingenuity and imagination in lesson presentation and devote appreciable time to acquainting student instructors with basic audio-visual materials and media. Often student teachers are required to originate and demonstrate instructional aids in laboratory and practice teaching periods. On-the-job workshops, seminars, committee functions, and supervision programs continue the emphasis on simple aids. Kits of materials for basic aids are distributed to schools for local use. We have found local audio-visual centers, with their cen-

(Continued on page 21)



Military education programs are under relentless time pressure. Scene is auditorium of Squadron Officer School, Maxwell Air Force Base, Alabama.

Quality of aids is interpreted in terms of effectiveness. At right, apprentice aeromedical specialists learn technique of taking blood pressure.



"Bread and butter aids" are hard core of military audio-visual program. Seminar scene at the Air Force Squadron Officer School, Air University.

A New Classroom for Reading

by Gertrude Whipple

A GOOD SITUATION for teaching reading is the classroom which is a learning laboratory. In it, many real things and pictures, much special teaching equipment, and many different procedures and techniques are used. The teacher provides a challenging and fruitful classroom environment and makes generous provision for exploring the world by means other than reading.

Audio-visual materials are used in such a classroom in great variety and have many values in the program. First, because they have a high degree of interest for children, they serve as natural springboards into reading. Second, they present ideas in a concrete and meaningful manner—often providing a wealth of detail that cannot be stated in words. Third, they are most helpful in teaching vocabulary.

A model of a goldfinch, for instance, tells the observant child much more, and tells it more quickly, than any verbal description of the bird. Also, terms learned in using audio-visual materials are easily carried over into the child's speaking and reading vocabularies. Fourth, they afford high-speed techniques of learn-

ing, for new things seen are often quickly grasped and are remembered longer than when one's experience with them is exclusively one of reading.

Let us note certain problems that a reading teacher faces and see how audio-visual methods can be used to alleviate them.

In the primary grades, effort is made to keep the child's textbooks well within his firsthand experiences. He usually reads first about the family and the neighborhood before he is introduced to the broader community. As he reaches the third grade, however, his reading begins to broaden out. Soon he is expected to interpret text about other parts of the world, events that have happened in the past, and a multitude of things with which he has had no direct contact at all. It is urgent that the teacher build up his experiential background as an introduction to the reading.

For this purpose, visual and auditory aids are indispensable. Teachers find cork boards useful for the presentation of visual information. For example, if the child is to read about contour plowing, contrasting pictures in colorful array illustrate good and poor use of hilly farm lands, providing visually a broad, instructive background for the reading. The felt or flannel board and other types of boards coming into use also have remarkable potentials for this purpose.

Pertinent filmstrips and movies may be shown preceding reading and study. In fact, the sound-color films available on a vast variety of subjects herald the impending doom of older teaching methods that sent the child to his textbook "cold."

In experimental centers, television is being used to increase the child's range of observation. Nina T. Flierl has described, in *The Reading Teacher* for October 1957, a stimulating TV program to encourage the reading of books about Indians. The program "visited" the Indian section of the New York State Museum, and, with the curator as guest, showed and explained an authentic headdress, a war club, a necklace, and some early cooking utensils.

Teachers have reported that the enthusiasm and curiosity created by television programs seen outside of the school send children to the library for related materials. TV's *Dragnet* has been known to lead reluctant readers into eager perusal of books about the FBI, Scotland Yard, and Sherlock Holmes.

In the reading program the teacher of each elementary grade is responsible for introducing certain new reading skills and maintaining and extending those cultivated in the grades below. He must give attention to a skill again and again during a semester without allowing class activities to become mechanical and routine.

Here again visual aids are of inestimable value. To promote good comprehension and interpretation, for instance, a teacher need not always ask questions after the reading. Instead he may ask the group to present the ideas through a diorama or a panorama. Perhaps it may show what the selection said about life in Boonesboro, the life of elephants in their native habitat, or a sequence of events in a story.

As another example, Nina Flierl's article cited earlier describes how skill in the use of library resources has been introduced to large numbers of children simultaneously through a television program. A librarian appearing on the TV screen spoke about parts of his library as they were shown and discussed how visitors might utilize library services to further their reading.

The tape recorder is an essential aid in evaluating the child's progress in speaking and oral reading. Playing two tapes, one of his initial oral presentation and the other of his presentation after several weeks or months of instruction, immediately proclaims not only to the teacher but to the child himself what he has achieved during the interval.

Pictures are extremely useful as a testing device. If a child, after studying an illuminating picture of an Eskimo hunting a seal; can supply valid answers to important questions about it such as, how far north or south of the equator the picture was taken, what was the season of the year, and what is one way in which the man earns his living, it is probable that he is acquiring geographic interpretation in reading. Another example is that of arranging in proper sequence pictures showing steps in a process about which the child has read. Furthermore, any fairly wide inspection of standardized reading tests will show the use of visual aids ranging from the simple drawing for testing the beginner's visual perception to the complex maps used to test map-text reading at the high school level.

One way of disseminating the techniques of a good reading teacher is through a demonstration on television. Numerous such demonstrations have been given in the Detroit public schools, to show, among other things, the teaching of the dictionary, the development of good comprehension and interpretation, and the teaching of vocabulary in context.

For in-service as well as pre-service education of reading teachers, sound-color movies are obtainable. One just released by the Wayne State University Audio-Visual Materials Consultation Bureau deals with a most crucial problem in reading instruction—the teaching of word recognition techniques. The use of this film enables the viewers to:

1. Observe the techniques of superior teachers and to see their classes in action.
2. Review important practical points in teaching.
3. Evaluate their own programs in developing good word-recognition techniques.
4. Obtain a basis for the discussion of word recognition.
5. Secure new stimulation and motivation for better teaching.

In a large city system such as Detroit it is difficult, if not impossible, for a limited supervisory staff to meet with all of the teachers requiring help at one time. On television, however, I recently met with hundreds of reading teachers for half an hour. By exhibiting graphs and charts of inventory data assembled in a typical classroom, I illustrated one means of determining the type of instruction the children in a given class require. By showing and commenting upon book displays, I presented certain procedures useful in meeting group and individual needs.

These, then, are some of the ways in which a teacher can be helped to improve his own procedures through visual and auditory aids; and ways in which they can be used in a new type of reading classroom which is beginning to emerge.

Hans Lindell and classmates concentrate as their English lesson comes over the radio. Broadcasting from an Ostersund Studio is Hans Anderson, high school teacher.

school radio in Sweden

by Sten S. Allebeck

SINCE SEPTEMBER 1929 school broadcasts have been regularly featured on Swedish Radio, the national Swedish network. Organized on a basis similar to the BBC of Great Britain, Swedish Radio is operated as a corporation, the majority of the stockholders being the radio industry and the press.

There are more radio sets per 1000 inhabitants in Sweden than in any other European country. Television is only in the experimental stage but the distribution network is rapidly expanding.

School broadcasts in Sweden started on a very small scale. There was a great deal of skepticism on the part of the schools, and programs consisted exclusively of straight talks by experts in various fields. But throughout the years interest grew, and more and more air time was allotted to educational programs. Today school broadcasts form an integral part of Swedish school life offering programs for all levels from the first to twelfth school year. The guiding principle has been that radio should be used to supplement the teacher's work, not to replace him, and to give the schools that which they cannot get through other media.

The school radio timetable is planned in cooperation with the Royal Board of Education and representatives of different teachers' organizations. The Swedish Radio has its own staff of fulltime producers who are exclusively concerned with the production of school radio programs.

A look at the weekly programs of the Swedish Radio will show that some 30 school broadcasts are transmitted over the whole network every week during the fall and spring semesters. Most school subjects are covered: foreign languages, particularly English, ancient history, dramatizations of famous books, music, geography, current events—to mention

some that occur during one week chosen at random.

School broadcasting means group listening. Unfortunately it often has to work under conditions that technically and acoustically are far from perfect. The classes are often very big, more than 30 pupils. It takes a good teacher to organize the listening in a way that the pupils get the most benefit from the broadcast. But the advantages inherent in the medium are also quite obvious. It offers a stimulus in the daily work and—this we consider very important—it encourages active, purposeful, critical listening which is an educational asset in itself.

Before the program comes on the air, the subject matter is prepared in the classroom. The children are "tuned in," and afterwards there is the follow-up work.

Printed materials play an important part in Swedish school broadcasting. For each of the three age groups in grade school, pamphlets of 48 to 64 pages are published by the Swedish Radio and paid for by local school authorities. The books contain texts and illustrations that are synchronized with the broadcasts themselves and offer material for classroom work. Thus school broadcasting in Sweden is truly an audio-visual aid. The pamphlets have a circulation of approximately 800,000 copies per semester which means that practically all Swedish school children, at least those in grade school, have one copy each.

Sweden can in many ways be considered an ideal country for radio in general and school broadcasting in particular. The country is sparsely populated. Radio is often the only daily contact with the outside world. Less than 8 million inhabitants are spread over an area comparable in size to Texas. The school system is uniform, which, among other things, simplifies the production of radio programs. A broadcast for ten-year-olds can be listened to by children in the same age group all over the country. The Swedish Radio is non-commercial which has certain advantages, since educational programs often have difficulties getting sponsors.

As stated earlier, it is the object of school broadcasting to supplement the teacher's work in the classroom. But that is not the whole story. During the last five to ten years, experiments have been carried out along other lines.

English has now for three years been a compulsory subject in Swedish schools beginning in the fifth school year. The inauguration of this law has created a great demand for competent teachers of English. As a consequence remote rural areas in particular have had difficulties finding satisfactory instruction for their children. This is where the school radio has contributed with its radio and correspondence method. It should perhaps be mentioned that experiments with this method have been carried out on a smaller scale during the last ten years.

This new teaching aid can be briefly described as follows: During the school year 1957-58 approximately 18,500 pupils from the fifth grade, 17,000 from the sixth, and 6,000 from the seventh are being taught English over the radio; that is, they get instruction from a radio teacher who cooperates with the classroom teachers. The radio teachers are chosen from among the best qualified in the country. They give two half-hour lessons every week over the radio. Their instruction is adapted to the possibilities and limitations inherent in broadcasting as an educational medium. The listeners are kept active practically every minute of the lesson.

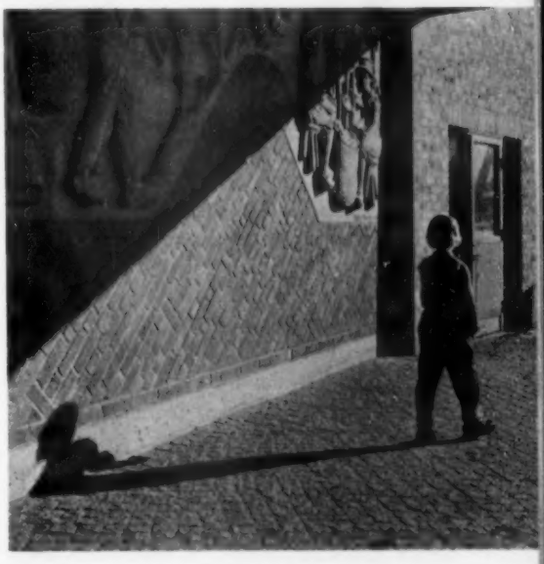
Chorus reading is one important feature. For questions and answers a special technique has been developed whereby the questions are put by the radio teacher and passed over by the classroom teacher to one of the pupils. When the radio teacher pauses, the answer is given by pupils all over the country to their classroom teachers and then the correct answer comes in with perfect timing. Thus, a two-way communication is built up and the give and take of an ordinary classroom is established.

Although under this teaching method the radio teacher is the expert who directs the whole teaching process, the importance of the classroom teacher must not be underestimated. His presence and active participation is necessary to secure accuracy and efficiency in the work. The periods between the radio lessons are spent on drill work and follow-up activities.

(Continued on page 32)

Swedish School Scenes

Studying foreign languages (Stockholm)



A school-day begins in Boras

Secondary school at Mörby

A hand-operated projector

Audio-Visual Aids for Self Instruction

by Helen L. Allion

AUDIO-VISUAL aids as instructional tools are generally thought of for group use, but they are even more important in individual instruction. They add motivation and interest, even when not imperative for communication of concepts.

This article will discuss audio-visual aids used in systematic individual instructional programs, either self-study (in which the individual purchases a course of study outright and is then on his own) or in home study (in which qualified teachers grade lessons and work with the students much as a resident teacher does, albeit by mail).

With both self-study and home study, regular instructional steps must be followed: goals established, courses organized in systematic step-by-step sequence, individual lessons planned—including motivation, just as in resident lesson planning. The audio-visual devices are included where they are necessary or helpful to learning, as in any planned instructional program. No good self-study or home study course includes them simply as "gimmicks." There is always a teaching *reason.*

Probably the best known aids for individual instruction are the records used with foreign language courses. They proved themselves in wide scale use by the armed forces during World War II, and many resident language centers now have facilities for individually listening to records or tapes. Self-teaching language courses range in price from $3 to $75, depending on care in preparation, amount of material included, and volume of sales. Home study courses are somewhat more expensive. In language courses, records are indispensable for demonstrating correct native pronunciation unless the student has some other means of hearing the language.

A hand-wound phonograph costing 98 cents is now used both in this country and abroad to teach English to non-English speaking people. The American Bible Society uses it in Africa and it is being considered for adult illiterates in the United States who often are too shy and embarrassed to attend classes. The phonograph is manufactured by RCA and sold only in quantity for use in integrated educational programs. The national distributor is Educational Services, 1730 Eye Street, N. W., Washington, D. C.

Records are also used to give dictation practice in home study shorthand courses, and resident schools often keep a set for individuals to practice their exercises.

In some instances, records may be used for other teaching values. Technical courses from Utilities Engineering Institute in Chicago cover subject matter completely in printed materials, but records provide motivation, emphasis, and a palatable method of repeating. UEI uses a semi-microgroove record which stands mailing without excessive breakage. Dillon Burroughs, UEI's education director, will share technical data on request. He writes that students frequently buy record players just to hear these records—contrary to the popular notion that people will not spend money for education.

Gaining in popularity are tape recordings. Robert G. Evans of Wyckoff Associates in Chicago has developed a method of reproducing them cheaply in quantity. Tape-recorded 30-minute weekly lectures are sent to Wyckoff students in a course on stock market theory and principles. Mr. Evans reports that student interest has increased immeasurably and that interest lasts. He feels that an informal method of presentation is important to give the student a feeling of having an instructor present.

The weekly presentation keeps materials immediately up-to-date, as would not be possible with written texts, even on the 3-month revision schedule some home study schools maintain. The tapes take 6 cents postage, and go to two or four students in sequence before being returned to the school for re-use. They are mailed on non-breakable Eastman Kodak 8mm movie reels in envelopes addressed with Addressograph plates. Charts and illustrations are reproduced to go along with the tapes as needed. Any tape recorder of the right speed may be used. This method permits two-way spoken communication between students and instructors, which the school encourages.

For 25 years DeVry Technical Institute in Chicago has loaned a hand-operated motion picture projector, screen, and 16mm films to students in its home study radio-television-electronics course. The projector operates on an ordinary light bulb and speed is controlled by the student himself. He can stop at any point, or back up. In 1955 DeVry shipped 5221 projectors and 75,541 films. A $12 deposit is required. Life of a projector is seven or eight years, loss through non-return about 5 percent. Film life is about 12 shipments. Cost per film runs about $1500 initially and $3 per print. Films are on 16mm silent stock. The projector is of die-cast, heavy-gauge sheet metal, rugged enough to withstand student use and shipping.

Projectors are retained by students about a year, films about three weeks each. A maintenance staff of five people services projectors and films. Films are planned expressly to fit into the course of instruction, to explain principles and phenomena that students find difficult to understand without animated illustration. For details, write O. I. Thompson, vice-president of DeVry.

The National Home Study School of New York includes one or more filmstrips with each of its high school subjects. Filmstrips are versatile and relatively inexpensive. They can be correlated with tape recordings or records to give sound; or with textbooks or study materials to provide color illustrations. They can be changed frequently to keep illustrations up to date; this is particularly important where illustrations might change faster than text materials. Aljac Productions, Inc., 107 North Longbeach Avenue, Freeport, N. Y., puts out an individual filmstrip viewer for about $20.

Transparent overlays can be used to show position and relationship and to isolate parts. Home study art schools use them in correction of student art work. The instructor places a sheet of transparent plastic over the student's work and quickly sketches over the part that needs attention. The student can see immediately what the instructor meant. At the same time, his own work is kept intact. Words could not possibly convey meaning as quickly. Use of overlays is faster than resketching part or all of a student's work, although home study art instructors employ this method also.

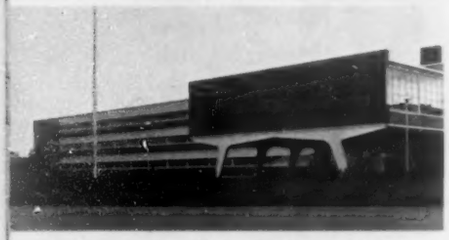
If audio-visual aids are insufficient to produce the desired learning outcomes, actual equipment may be sent, especially where skill in manipulating materials is one of the course objectives. The text is prepared specifically for the equipment sent, and equipment is chosen to meet long-range and immediate teaching goals. The whole must be integrated and organized in systematic, stepwise fashion, with adequate control of vocabulary, reading level, readability, concept density, and so on. Pretests and, later, returned assignments give a check as to whether the average student can learn from the materials without too much difficulty. They give data for improving instructional qualities of materials.

Completed work projects may be returned for instructor's comments, and in some instances, photographs of finished products are submitted. Upholstery Trades School in New York sends students professional upholstering tools and all the materials for two large upholstered chairs and smaller beginning items. Rather than have bulky finished items shipped back for inspection, students may send snapshots. These, together with employment records of graduates, give the school evidence of the effectiveness of its teaching.

Audio-visual aids and laboratory materials that are too expensive or bulky to send to students for individual home use are often provided at centers. The University of Wisconsin has centers scattered throughout the state where its home study students can meet periodically with teachers and use equipment. Private home study schools very often provide aids and equipment at the school in a terminal resident period. If use of aids or equipment is desirable but not absolutely essential, the school may maintain a center to which the student can come at his convenience. Sometimes schools will enroll only students who are already employed around the equipment—as railroaders and stationary engineers, the majority of whom are trained by home study while on the job.

"Taking your science class on another field trip, Swanson?"

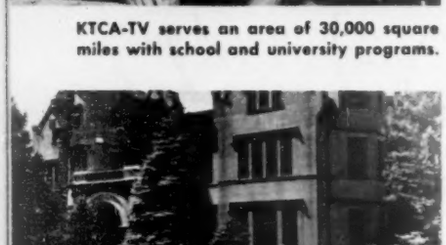
Minneapolis and St. Paul superintendents Rufus Putnam and Forrest Conner, honorary convention co-chairmen, examine DAVI program with E. Dudley Parsons.



New modern high school just outside Twin Cities typifies rapid growth of suburbia.

The main campus of the University of Minnesota at Minneapolis. Other centers located at St. Paul, Duluth, and Rosemount.

KTCA-TV serves an area of 30,000 square miles with school and university programs.



American Swedish Institute sponsors cultural program to create understanding.

Minnesota

The Twin Cities of Minneapolis and St. Paul shake hands across the Mississippi in friendly rivalry.

esota welcomes DAVI convention

LAND OF—

Colleges and Culture

University of Minnesota; many state and private colleges; world travelled Minneapolis Symphony Orchestra, Apollo Club, St. Olaf College Choir; museums of art, history and science.

Farms and Food Processing

Largest cash grain market; important grain milling center; largest sweet corn pack; leads U. S. in butter, pork and veal production.

History and Heritage

Norsemen inscribe Kensington Rune Stone; Father Hennepin discovers St. Anthony Falls; Henry Schoolcraft locates source of Mississippi River in Lake Itasca (verITAS CAput); Merritt Brothers find iron ore; First hydroelectric plant, St. Anthony Falls, 1882.

Industry and Imagination

Minnesota Mining for recording tape; Minneapolis-Honeywell for inertial navigation (missile guidance); Northern Pump for missile launchers; Remington Rand UNIVAC; General Mills and Winzen Company for "skyhook balloons"; many film producing companies.

Lakes and Legends

10,000 lakes feeding three water sheds — draining into Hudson Bay, Atlantic Ocean, Gulf of Mexico; Song of Hiawatha; Gitchi Gumi, the Big Sea Water; legend of Maiden Rock; sacred Indian Pipestone quarries; tales of Paul Bunyan.

Vacations with Variety

Canoeing in the Quetico — Superior wilderness; fishing and hunting; state parks; camping and resort life; Minneapolis Aquatennial; skiing on water and on snow; St. Paul Winter Carnival.

STATE OF MINNESOTA
DEPARTMENT OF EDUCATION
ST. PAUL 1

Welcome to DAVI Members -

The Department of Audio-Visual Instruction, meeting in Minneapolis, April 21 - 25, 1958, will be an outstanding event for many reasons. Attention to many aspects of education in Minnesota is at a high level of development. Cooperation between various educational agencies concerned with audio-visual methods is extremely cordial.

In September 1957, Minnesota began the operation of a new educational television station, which has already received widespread attention, participation, and acclaim. This development in itself indicates not only professional interest in this means of education but lay interest as well, since the initial financing of the project was all done through voluntary contributions.

Beside the interest and value in the many professional phases of the conference, those who attend the meeting in Minneapolis will enjoy the bursting freshness of spring, which comes nowhere else in the nation more attractively than in Minnesota. All the audio-visual theories can be put into practice by listening to bird songs and viewing the beauties of nature. Furthermore, 1958 is the year in which Minnesota celebrates its 100th Birthday as a State. Accordingly, visitors from far and near are cordially urged to come to this State to join in the celebration and partake of the many benefits available.

Sincerely,

Dean M. Schweickhard

Dean M. Schweickhard
State Commissioner of Education

The Convention Planning Committee: l to r, Neville Pearson, Owen Johnson, Wesley Grabow, Robert Schultz, E. Dudley Parsons, Mary C. Welch, Emma Storsteen, Ellerth Overboe, Arnold Luce, Theodore Johnson, W. Shager. Members not pictured are Wilbur Jensen, Thomas Tripet, and M. I. Smith.

E. R. Welke, director of the Minnesota University Extension Library, discusses new films with E. Dudley Parsons.

the scarborough story

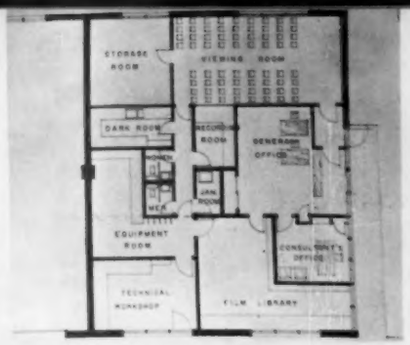
by Cecil E. Wilkinson

Scarborough is said to be the fastest growing municipality in the world. The population increased in the last 12 years from 28,444 to 151,885; elementary schools from 21 to 60; secondary, from 2 to 4; elementary school pupils from 3,854 to 27,775; secondary school pupils from 825 to 4,631; and teachers in the elementary and secondary schools from 135 to 1,164. During the past five years, on the average, 16 new pupils have entered Scarborough schools every day. This illustrates the startling fact that an additional classroom and teacher are needed every other school day. Above, Scarborough kindergarteners show keen interest when films are used.

First-grade pupils participate in discussion following a film showing by Mrs. Eunice Beam in her Terraview Heights classroom. Teachers are encouraged to preview for best results, but are able to do effective work by putting the directive questions from the catalogs on the chalkboard before the lesson, having them read aloud by individual pupils before the screening, getting answers themselves during the showing, and conducting a discussion immediately after the presentation.

The author is consultant in audio-visual instruction for the Scarborough Township public schools, Ontario, and president of the affiliate that made DAVI an international organization when it was organized last spring. Mr. Wilkinson, who played an important role in getting affiliation status for active DAVI members from the several Canadian provinces, writes: "While distance makes meetings of the Canadian Audio-Visual Association extremely difficult, indications are that it will be an active organization. Plans are underway for exchange of ideas, and for beneficial research. It is hoped that information concerning these activities will be passed on to the general membership of DAVI through the medium of this magazine." Mr. Wilkinson was principal of a large public school in 1955 when the Scarborough Board of Education matched a grant of films to the value of $10,000 for elementary schools and $5,000 for secondary schools. (Additional grants were made in 1956 and 57.) With the aid of a single "excellent" secretary, the author undertook the task of building up the Scarborough film library and audio-visual program. During a four-month period he taught demonstration film lessons in 148 classrooms and held staff discussions. One hundred percent of the schools requested this service and many of them continue to do so. The Scarborough department of audio-visual instruction now has a staff of four full-time workers.

Assembling catalogs in the temporary classroom quarters of the department of audio-visual instruction. In accord with the Scarborough philosophy that pupils and teachers in the classroom are of first importance and that the AV department should cater to their needs, the writer and his secretary devoted some 3000 hours, most of them spare time, to the production of five catalogs: primary division; junior division; intermediate division (grades 7 and 8 only); secondary school; and reference (containing all the materials in the other catalogs). Each catalog is also a teaching manual. All films have been carefully correlated with provincial and local courses of study. They are listed in the catalog indexes and pages under subject, grade, and unit. Recognizing the difficulty of previewing films in the large school, good usage has been made possible by providing for each film a description, a word list where necessary, and directive questions.



Top: Architect's drawing of the new audio-visual center now under construction for the Scarborough department of audio-visual instruction. Present quarters in the Scarborough Board of Education Administration Building are restricted, but the new center will enable continued and expanded service to that important person—the classroom teacher. Bottom: DAVI member Emerson Freestone utilizes darkroom equipment in the Toronto teaching aids center. Established longer than most of the others in the province, it has a program of which any city might be proud. Bruce Adams, secretary of CAVA, the new Canadian affiliate of DAVI, is the director. Mr. Freestone is his assistant.

Electronics technician Ronald Pascoe repairs a projector. The Scarborough audio-visual staff feels that one of the best ways of serving the classroom teacher is to provide maintenance of equipment and rapid service. This has been achieved by the employment of a fulltime qualified electronics technician. A fourth and recent member of the audio-visual staff has taken on the duties of film librarian and is responsible for delivery. At present he is organizing a new filmstrip preview library, the purpose of which is to facilitate wise purchase of filmstrips for film libraries in local schools. Filmstrips in the preview library are those approved by the Ontario Department of Education after evaluation by teacher committees.

Pupils and audience alike are enthralled by moving pictures used as a teaching aid during a demonstration lesson at the convention of the Ontario Education Association. During Easter week each year Ontario teachers assemble in Toronto for their annual meeting. For several years a one-day audio-visual program has been part of the schedule. So well has it been attended that in 1958 it is expected to be extended to two days.

Lorne Shewfelt's lesson on the gross anatomy of the frog is being televised and broadcast to a class in a second room. This was part of an experiment in closed-circuit television, probably the first in Canada, conducted by the Scarborough Board of Education in Winston Churchill Collegiate last November. Two classrooms were set up with two-way audio facilities and Westinghouse video equipment. The camera had a zoon lens with automatic remote control of focus, iris, pan, and tilt. Five experimental lessons were taught—grade 11 physics, grade 10 biology, grade 13 algebra, grade 12 history, a bookkeeping lesson for a graduate commercal class, and a grade 12 commercial class.

The Scarborough closed-circuit experiment was deemed successful, especially as it demonstrated the great value of "blow-ups." In the viewing room (above) the blow-up of the frog was seen on two monitors on a much larger scale, and therefore more clearly than normally would have been possible in the classroom, even for those seated in the front row.

Note the contrast above where students view a demonstration of frog anatomy without benefit of television. The belief in Scarborough is that the use of the "master teacher" technique on closed-circuit TV will make the present shortage of specialist teachers in science less critical, but that it should in no way be used as a general remedy for teacher shortage. Every teacher should use TV to present special lessons, but should conduct most of the lessons in the traditional manner. The teacher should take charge of his class in the TV receiving rooms in preparation for the telecast and conduct discussion and initiate pupil activity afterwards. In this way the undesirable division of teachers in two classes — "master" television teacher and "caretake" teacher will be avoided. Scarborough hopes to continue experimentation with careful evaluation until schools are ready to make full use of the medium. The closed-circuit experiment in Scarborough was preceded by experiments in classroom TV sponsored in 1954 and 1956 by the Canadian National Advisory Council on School Broadcasting with the cooperation of CBC. These experiments were nation wide with programs originating in CBC studios.

No story of audio-visual progress in Scarborough is complete without describing the role of the Ontario Department of Education, where James W. Grimmon, long-time DAVI member, is director of audio-visual education. The Department's film library serves 7,105 elementary and 383 secondary schools of the province. No rental is charged for films which are sent out for one-week periods. The library's 1,200 titles and 11,000 prints point up a philoshophy of having libraries "in depth" rather than "breadth," thus coming closer to providing the classroom teacher with the film he wants when he wants it. From September 1956 to June 1957 a total of 54,739 films were shown to an audience of 4,604,697. The Ontario Department, along with those of the other provinces, cooperates with the Canadian Broadcasting Corporation in a school radio program. Half-hour broadcasts are brought in each Friday from October to the end of May, coast to coast. Some of the programs originate in other countries of the British Commonwealth. The Ontario Department cooperates singly with CBC on half-hour broadcasts brought in Monday through Thursday from October to April. Teacher consultants are used. Schools have reported the broadcasts a valuable teaching aid. The Department also provides a summer course highly rated by leaders in the audio-visual field. (Audio-visual courses are not otherwise offered in Ontario universities). Mr. Grimmon is principal of the course which operates five hours per day for five weeks. He is assisted by five instructors in these areas: non-projected visual aids, audio aids, filmstrips, films, and operation and care of all types of equipment. Lectures deal with history and philosophy of audio-visual instruction but emphasis remains on practical demonstrations.

learning at military pace

(Continued from page 9)

tralized facilities, materials, and guidance to be the key to success in this program. Without the center, teachers and supervisors may make sporadic attempts to use aids, but there will not be a continuous program to insure steady improvement.

It is futile to attempt to lay down arbitrary rules for selection of audio-visual media, aside from a few obvious learning situations. Many instructors have individual preferences that should be recognized. Aids chosen by the instructor will be used to better advantage than those selected for him by AV experts or educational administrators.

In the military we have in mind at all times the improvement of quality of aids. We interpret quality in terms of effectiveness, and effectiveness in terms of accomplishing teaching objectives. Sometimes elaborate and colorful aids are required in order to attain high quality. Sometimes highest professional graphic or artistic standards must be adhered to. It depends upon the situation and what is to be taught. The blackboard, acetate rolls, tear sheets, opaques, and frosted glass slides—these bread and butter aids are the hard core of the military audio-visual program.

Fewer Production Frills

Aware that the potential of films in teaching has never been realized because of costs, the military services have instituted simple filming techniques that eliminate production frills and shorten the length of films. This is accomplished in several ways. Central filming agencies produce short films, planned from the start to be integral parts of lesson presentations. Kinescope recordings are sometimes utilized. Some military schools are being provided with minimum production equipment to prepare short sound films locally. In other instances the central agency provides technical personnel and equipment to produce short sound films cooperatively with personnel and facilities of the requesting schools.

The military services have collected large amounts of footage of events and subjects filmed throughout the world. Although good use is made of all of this film in fulfilling its primary purposes, further use is now being made of "film clips" taken with or without sound from the original. Ordinarily, film clips have no built-in introduction or ending but depend upon the instructor to fit them in as supplements to his verbal presentation.

Trend to Simplification

The diazo-type overhead projector transparency has become a mainstay of military audio-visual programs. The simplicity of production processes, the chance for variety, and the efficiency of projection have led to widespread use throughout service schools. Transparencies together with photographic slides have greatly reduced the use of large graphic charts.

There is a trend to simplify large demonstrators and trainers. Single-purpose devices are replacing the complex and multi-purpose ones. In many instances, graphic aids have proved equally as effective as the more expensive and cumbersome three-dimensional aids requiring long production schedules. Single-purpose AV equipment has also proved more economical than multi-purpose machines. Too often efficiency is sacrificed in these combinations, with resultant inferior output. The disadvantages outweigh the advantages.

Where possible, mechanical devices are employed to save human skills and talents for fuller use elsewhere. Lettering, image-enlarging devices, and ready-to-use materials have been the most fertile fields in this regard.

Industry-sponsored audio-visual workshops are proving useful to military instructors and offer an economical service that seems likely to be more fully utilized in the future. The close association of business, industry, and military personnel in defense programs is increasingly paralleled by similar teamwork among their respective educational programs. Mutual civilian and military use of audio-visual aids in teaching engineering subjects, particularly in areas of electronics, nuclear energy, and safety, is common practice. Exchange of medical and religious audio-visual aids has been outstanding. Today a prime responsibility of the military audio-visual specialist is to be well informed about civilian audio-visual programs.

Membership and participation in national professional organizations by military AV specialists is one means of exchanging information. Although lack of travel funds curtails attendance at meetings, there is increasing interest in the activities of these organizations. Noteworthy is the military membership in DAVI which has been accorded recognition by the establishment of an Armed Forces Section.

As we have seen, military instructors have a rich background of experience to draw on in determining use of audio-visual media. This enables them to improve aids while reducing expenditures, because, contrary to widespread opinion among civilian educators that large amounts of money are available to military schools, economy is now the watchword.

Simple aids of high quality, produced locally, are increasingly fulfilling the specific needs of instruction. Cooperation with civilian institutions and industrial organizations cuts audio-visual cost. Fuller use of projected aids and television are noteworthy trends. (See Charles McIntyre's article on page 4.) Because of constant and rapid changes in weapons, the tempo is still wartime. At no time in history has there been more urgent need for better instruction in less time. Audio-visual aids are meeting the challenge.

Fall Meetings Turn Up Variety of Themes

MAKING Teaching More Effective Through Wider Use of Audio-Visual Materials" was the theme of the Fifth Annual Conference of the Texas Audio-Visual Education Association held in Austin, November 3-5.

Highlights included a panel discussion by school administrators; a talk by a University sociologist; and a luncheon honoring citizens who were instrumental in getting a film legislative program passed during the last session of the Texas legislature. The latter included state legislators and officials of the Texas State Teachers Association, State Department of Education, and State Parent-Teachers Association.

A challenge was presented to the Conference when Dr. Moore, professor of sociology at The University of Texas, said that it is the responsibility of audio-visual education and all education to keep alive the desires and aptitudes for learning by supplying materials in an attractive form.

In the first general session a panel of school administrators, headed by L. D. Haskew, dean of the school of education and vice-president of The University of Texas, pointed out that the AV director should become involved in the the whole school program, particularly in the development of the school curriculum. To do his job effectively, the panel said, he must know what is going on in the schools from kindergarten through grade 12.

A significant outcome of the Conference was the decision to request that DAVI set up an educational television workshop in the Texas area. TEXAVED will offer to take responsibility for promotion and implementation.

The coming year will also witness a more active interpretation of audio-visual education on the local level. TEXAVED will reorganize its geographical districts to coincide with those of the Texas State Teachers' Association in order to be able to advance audio-visual education more effectively.

The main work of the Conference was accomplished when the participants divided into four divisions to discuss action programs for bringing audio-visual education to the heart of the instructional programs in schools and colleges in the state. Divisions organized permanently included teacher education; system-wide supervisors; county and cooperative supervisors; and building coordinators, principals, teachers, and librarians.

The Conference made it possible for TEXAVED to extend its scope and membership by allowing all persons to become affiliated who are involved in education on a professional level and who are interested in audio-visual education.

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"Focus on An Enriched Curriculum," the theme of the Michigan Audio-Visual Association's mid-November meeting in Ann Arbor, was also the topic for the keynote address by Theral T. Herrick, director of curriculum for the Kalamazoo public schools.

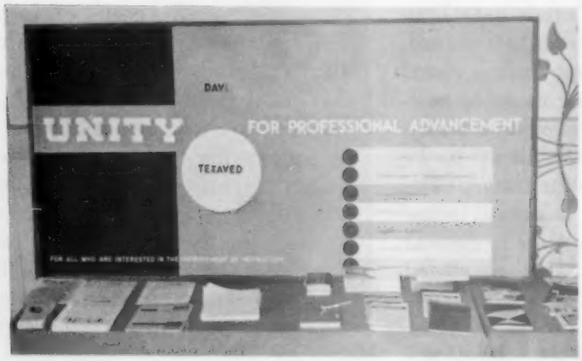
Dr. Herrick's talk was followed by section meetings on the elementary curriculum and AV methods, and the high-school curriculum and AV materials. Chairmen were H. Leroy Selmeier, director of instruction, Grosse Pointe and Roger Zinn, Grand Rapids public schools. A third section on audio-visual meetings and workshops was chaired by Marie McMahan, Battle Creek public schools.

Demonstrations included making transparencies by high-contrast photography, coloring transparencies, dry-mounting, duplicating objects by plaster and rubber cast, developing dioramas by simple museum techniques, making picture transfers, using the Polaroid process for slides, effective lettering for displays, and preserving specimens in alcohol and formaldehyde.

Chairmen for the general sessions were MAVA's president and vice-presi-

Retiring TEXAVED President Harold Wigren receives gift from H. Wiley Embrey, newly elected.

TEXAVED audio-visualizes its annual meeting; DAVI, the 1958 Convention, and the Audio-Visual Commission for Public Information stand to profit from the exhibits.



dent, Robert LeAnderson and Kenneth Bonine. Mr. Bonine was also a member of the Program Planning Committee with Donald W. Ickes, assistant director of the AV center at the Universtiy of Michigan; Ford L. Lemler, director of the University's center; Margaret Savery, Ann Arbor High School; and Clara Dodge, Tappan Junior High School, Ann Arbor.

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Main speakers at the Seventh Annual "New Tools for Teaching" Conference in Asheville in October were Herold C. Hunt, Harvard University, representing the Ford Foundation's National Program in the Use of Television in Public Schools, and Maurice Mitchell, president of Encyclopaedia Films, Inc. The latter spoke on advanced educational methods in the Soviet Union.

The "New Tools for Teaching" Conference is the yearly meeting of the Department of Audio-Visual Education of the North Carolina Education Association.

Group demonstrations were given on the felt board, closed circuit TV, the overhead projector and teacher-made materials, projection of live microorganisms, tachistoscope in reading and arithmetic, bulletin boards in teaching, lettering for teaching and display, the chalkboard, and aviation educational materials.

In general sessions heavily weighted toward TV, Mrs. Mary E. Denton, studio teacher in a general science television course, conducted a class; Barry Morris, Asheville city schools, reported on closed-circuit versus broadcast TV; Harold Dotson, Charlotte and Mecklenburg county schools, and Kenneth McIntyre, University of North Carolina, reported on the Hagerstown project. Allan Finstad of the Ozalid Corporation and John Pritchett, Appalachian State Teachers College, demonstrated graphic arts techniques via closed-circuit TV.

J. W. Carruth, AV director at Fayettsville, presided at the opening session and E. C. Funderburk, superintendent of the Asheville city schools, welcomed the delegates.

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The theme for the Ninth Annual Fall Conference of the Audio-Visual Directors of Ohio, "What Can AV Do for PR?" was carried through in a panel discussion, in the keynote speech by E. E. Holt, Ohio state superintendent of instruction, and in sessions on the tape recorder and the field trip.

Member of the panel on public relations which began the two-day meeting were LeRoy A. Born, AT&T, New York City; B. B. Baldridge, WGAR, Cleveland; J. E. Willis, president of WLMJ, Jackson; Ed Clark, editor of the Jackson Sun Journal; Vincent Jukes, director of radio and AV, Ohio University; Norman Woelfel, teaching aids laboratory, Ohio State University; Edgar Dale, Ohio State; John Whipple, AV director, Berea; Margaret Saylor, AV director, Parma; and George Hammersmith, AV director, Toledo. Kermit Dougherty, Jackson city schools, acted as moderator. Wilfred S. Wiest and L. F. Cowgill of Parma conducted a session on the tape recorder and Edgar Dale, one on the field trip. Half-hour workshops were conducted on the use of films, filmstrips, and opaque projector.

AUDIO-VISUAL DINNER. Above Walter Bell accepts an attaché case, a gift from Georgia audio-visualists who honored him at dinner in Atlanta September 27. Speakers who described Mr. Bell's AV activities at local, state, and national level were Ira Jarrell, superintendent of the Atlanta city schools (far left); Garland Bagley, Florida State Department of Education (not shown); and Anna L. Hyer, DAVI (far -right). Partly hidden by the guest of honor is Mrs. Bell. Taped dinner music supplemented the visuals on the right.

AVEAC to Meet

Dean Stephen M. Corey of Teacher's College, Columbia University, will keynote the annual meeting of the Audio-Visual Association of California at Asilomar January 31-February 2. Dean Corey's keynote speech on the topic, "Future of Materials in the Curriculum —Practice and Research Point the Way," will be followed by a second talk during the final general session on "A New Look at California."

Trends in the integration of audio-visual materials with the school library will be discussed at an afternoon session February 1.

Section meetings planned for February 2 include: cataloging instructional materials, Leslie Janke, San Jose State College; progress report on TV education, Larry Smith, Alameda county schools and Gardner Hart, Oakland public schools; local preparation of curriculum materials, William Sanborn, San Francisco public schools (chairman), Edward Clemmer, Contra Costa county schools, Orville Goldner, San Francisco State College, and Robert Burgert, San Diego city schools; and, What should colleges teach in AV education? Richard B. Lewis, San Jose State College (chairman), David Pasco, La Mesa, Ward Phillips, Alameda county schools.

The Army Language School will make a presentation preceding Dean Corey's final address. The Association's president, Roy Barron, will conduct the business meeting Friday afternoon.

LOOKING AT *New Literature*

FROM THE MASSES of printed matter on the pros and cons of educational televison, two recently produced articles may prove of interest to AVI readers. One is a report of the findings of the research consultant in the Curriculum Laboratory of the St. Louis public schools following a study of direct teaching by television. The other is a proposal for the increased use of television in education made by the chairman of the Department of Communications in Education of New York University.

In the first, "Large-Group Instruction by Television: An Experiment," (*School Review* 65:119-133, Summer 1957), Earl G. Herminghaus reports that instruction was offered in ninth grade general science, ninth grade English composition and second grade spelling. The experiment was conducted under the auspices of the St. Louis Educational Television Commission, with assistance from the Fund for the Advancement of Education. One group, taught by a television instructor, was compared to other groups set up as controls. Conclusions were that: (1) "As measured by the testing instruments employed, students in large-group television classes in ninth grade English composition and science showed a degree of achievement at least equal to that of students in control classes taught in the conventional manner." (The second grade spelling experiment was not completed at the time of this report.) (2) "The study did not furnish any conclusive evidence on the question whether the traditional pattern of instruction can be modified so that an entirely new concept of teaching personnel, numerically and functionally, may be developed." (3) Teachers saw both advantages and disadvantages. The chief handicap reported concerned "the difficulty of meeting the needs of students of varying abilities." The pupils in the experiment, "on the whole, did not react favorably to the program." Finally, the researcher suggests that much experimentation remains to be done, particularly in exploring the "problem of student acceptance" and "how to meet the needs of students of varying abilities."

In mid-February when Charles A. Siepmann's address to the third general session of the American Association of School Administrators' Convention received nation-wide publicity in the newspapers, radio, and television, many educators were seriously concerned with the content of his remarks. The speech has been reprinted in its entirety as an article under the title, "Mass Communications and Its Relation to the Crisis in Education," in *Schools on the Threshold of a New Era: Official Report of The American Association of School Administrators.* (AASA, 1201 Sixteenth Street, N. W., Washington 6, D. C. 1957. p. 80-89.)

A re-reading of the speech brings to light prophetic notes if one compares Mr. Siepmann's description of secondary and higher education in the USSR with the President's recent call for intensification of educational effort in this country. The need for excellence in teaching techniques so urgent at the peak of teacher shortages is related by the author to the vast, virtually untouched potential in educational television.

Mr. Siepmann theorizes on the futility of insisting on small classes and quotes the late President Charles S. Johnson of Fisk University who said: "Keeping classes small by hiring poor teachers simply enables the teacher to communicate his mediocrity in an intimate environment." In lieu of employing ill-trained or partially trained "emergency-certificated" teachers, the use of the master-teacher and television is proposed.

After summarizing the effects of the experiments in Chicago, Hagerstown, and Pittsburgh, Mr. Siepmann presents six important aspects of television in the improvement of teaching. In his opinion television is a "revolutionary power put in our hands with which to reshape the basic structure of our educational system."

Other Publications Received

Civic Education: Programs for Adults, by Arthur P. Crabtree. National Association of Public School Adult Educators, 1201 Sixteenth Street, N. W., Washington 6, D. C. 1956. 64 p. $1.50.

This pamphlet is the first in a contemplated series on critical areas in the field of adult education. Beginning with civic education, the series will go on to consider economic, and parent and family life education. "Civic education" as construed in the confines of the bulletin includes "all those public affairs, problems and issues, from the local to the international level, which are vested with public interest." Topics treated are: identification of needs and interests, planning, forms of civic education, administration, evaluation, tested program ideas, and a discussion of civic education and democracy.

The entire problem encountered in this bulletin is of interest to all educators who deal with materials of instruction. Of special interest, however, are Chapters 4 and 7, dealing with forms of civic education and tested ideas. In the former, detailed descriptions of vehicles for group learning are presented—the discussion group, the forum, the institute, and program service.

In the chapter on tested program ideas, 45 specific suggestions are based on practices which have been successful in adult education throughout the country.

Public School Adult Education: A Guide for Administrators and Teachers. National Association of Public School Adult Educators, 1201 Sixteenth Street, N. W., Washington 6, D. C. 1956. 156 p. $3.90.

With the widespread growth of adult education, both under the auspices of the public school and other

community agencies, the audio-visual educator finds a corresponding growth of interest in and use of audio-visual materials. This rather complete manual for administration gives the audio-visual director an insight into the ways in which a wide variety of instructional materials can be integrated in the adult education curriculum. Chapter 4, "Organizing Facilities for Adult Education Programs," provides basic data for extending audio-visual collections and services to this expanding arm of eduction.

"Audio-Visual Aids in the Secondary School." *High School Journal* 40: 210-36, March, 1957.

Six educators have contributed discussions on various aspects of audio-visual methods and materials in the secondary school. If you have not seen this issue of *High School Journal* (University of North Carolina Press, Chapel Hill), you will be well repaid by securing a copy. Maurice Iverson of the University of Wisconsin relates the obsolescence of some teaching techniques to the problem of "drop-outs" in high schools. His presentation of the "Importance of Audio-Visual Aids in the Secondary School" besides reviewing appropriate materials in the audio-visual field, restates values resulting from the utilization of these teaching tools in the modern educational program. Kenneth M. McIntyre, head of the bureau of audio-visual instruction of the University of North Carolina, explores the special virtues of the educational film, recapitulating pertinent facts from researches on film learning and suggesting ways for school administrators to capitalize most effectively on the costly investments made by school systems in audio-visual equipment.

"TV in the Curriculum," by Donald G. Tarbet, describes the educational offerings of WUNC-TV, Consolidated University of North Carolina. Both in-school and after-school programs are mentioned. Frequent objections made by teachers who resist the use of audio-visual aids are countered by positive suggestions in "Helping Secondary School Teachers Make Better Use of Audio-Visual Aids," by H. Leroy Selmeier, director of instruction in the Grosse Pointe public schools. Finally, Keneth D. Norberg of Sacramento State College, departmental editor of AVCR, lists some criteria for the selection of films for secondary schools and notes basic sources commonly used by AV directors and supervisors in locating films for classroom use.

Newsletter (issued occasionally by the Twentieth Century Fund.) The Fund, 330 West 42nd Street, New York 36.

If you do not receive this newsletter, get Twentieth Century Fund to place you on their mailing list. You will find the information on economic and social problems of help in your instructional materials center.

Austrian Journal Shows AV in Strong Role

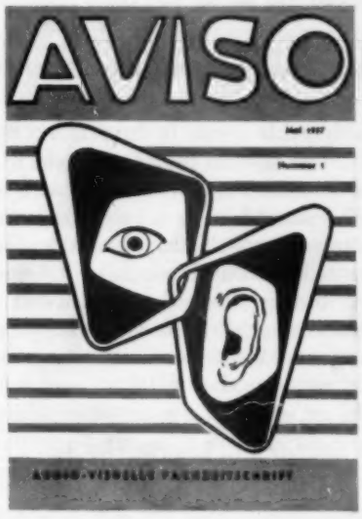
THE SPRING of 1957 marked two events of significance to internationally minded audio-visualists. At the same time that DAVI acquired international status through its Canadian affiliate, the first edition of *AVISO*, the official publication of the Austrian Society for Audio-Visual Education, appeared in print. (See news note on page 29.)

Published on a quarterly basis, *AVISO* is printed in German and free to members. It brings to teachers the techniques and practical uses of audio-visuals in Austria and other countries and acts as an information center for European educators.

The tone of the magazine is enthusiastic and direct, the articles specific in their instructions for practical application to teaching. The American reader is aware that audio-visuals still need to be "sold" to many Austrian teachers but feels sure that the pragmatic approach and confident tone of the articles will bring success.

The articles cover speech laboratory methods using tape recorders, AV aids for learning foreign languages (with strong emphasis on English), uses of the flannelgraph, the iconographic film, AV media in adult education, and departments similar to AVI's news and materials and equipment sections. The green and white cover of the first issue features the modern design shown above.

Recognition of the importance of audio-visuals in education is more or less taken for granted in a country as technologically developed as the United States. Austria, however, was not only torn by war, but occupied by the Germans, Russians, and Western allies. It seems to the reviewer that this digest-sized magazine with its 16-page first issue coming out of postwar recovery should be of special inspiration to audio-visualists everywhere, for the audio-visual role



AVISO, Volume I, Issue 1

emerges strongly in educational systems which themselves have had a difficult struggle to rise from wartime chaos. Significant is the courage of Austrian enthusiasts in overcoming seemingly gargantuan budgetary and cultural difficulties in a country accustomed to highly formal methods in education.

Directly, by repeated implications, and by references to the quality of the work done in this country, it is clear that the United States is considered the undisputed leader in the development of both AV materials and techniques in public education. In this framework, audio-visuals take on new significance as an international medium for sharing educational methods. They become spokesmen for democratic education. This fact, in the opinion of the reviewer, places upon the American audio-visual field the responsibility to export only the best in ideas and techniques.

—LA VERNE MILLER.

Materials and Equipment

NEW IN FILM FROM . . .

ARTHUR BARR PRODUCTIONS, 1265 Bresee Ave., Pasadena, Calif.:

Hiking Is Fun (400-ft, color) is designed to create in the primary age child an interest in exploring the out-of-doors. A family of four take a foothill hike and learn to recognize some plants, lizards, birds, animals, and insects. Emphasis is given to the need for proper clothing and leaving a clean camp after lunch. This type of film should lead to an interesting free discussion period. $100.

AVALON DAGGETT PRODUCTIONS, 441 N. Orange Dr., Los Angeles 36:

A Father of the Southwest (400-ft, color) reviews the life and contributions made by Father Keno among the native Indians of Arizona and New Mexico. His work with the natives in the introduction of new seeds and plants, his gifts of animals, and the role of the mission chain he created point up the importance of this man's labors. Students of the history and culture of the Southwest will enjoy the film's historic detail as well as its colorful beauty. $100.

AVIS FILMS, P. O. Box 643, Burbank, Calif.:

The Story of Agriculture in California (700-ft, color). This film traces the development of agriculture from the days when the Padres brought their seeds and vines to California. It takes up the effects of the Gold Rush and shows how water, transportation, cooperatives, and agricultural schools effect the eventual development of agriculture. One sees the dairy cattle, dairies, poultry farms, orchards, cotton fields, the nut crop, sugar beet development, and dried fruit and canning industries. The recent dependence of the farmer on modern machines and means of transportation is given special attention. This film can be used at almost any level from grade 4 on. Excellent production. $150.

BAILEY FILMS, INC., 6509 De Longpre Ave., Hollywood 28, Calif.:

Art teachers interested in the interpretation of modern schools and form in art will want to see these three films. Excellent photography, carefully planned narration, and clever use of animation makes each highly informative and challenges the more mature viewer to seek further information and examples of the art portrayed. The films in the "Understanding Modern Art" series are:

Non-Objective Art (8-min, color) stresses the need for a state of mind or point of view. Pictures are analyzed by diagramming and referring to examples found in life. Kandinsky's basic elements of line, shape, and color are examined in modern textiles, industrial design, and painting. $60.

Impressionism (7-min, color) shows the basic techniques of the artists of this school. It includes simplification of detail, use of texture and grained color combinations, and generalization. The importance of omission is stressed. $60.

Cubism (7-min, color) through animation, shows how a picture is composed, line by line; how the artist may modify the subject in line, color or design to suit his taste. Points up form and vibration and shows that the artist creates an imaginative picture that is the product of his mind and his impressions, or reactions to a situation. $60.

Other Bailey Films are: *Mexican Fishing Village* (500-ft, color) is located on a small island on Lake Patzcuaro. The daily life of these villagers is centered around the repair of their nets, catching the fish, and cleaning and drying them. The construction of a canoe and the division of the catch emphasizes the commercial aspects of their simple lives. Excellent color and photography. $100.

Hanging and Finishing a Hem (500-ft, color) was produced at Oregon State College. It shows the techniques of pinning, folding the edge, basting, pressing, making a gauge, and finishing. Various stitches are demonstrated. Home makers will profit from this well-designed film. $100.

CORONET FILMS, 65 E. South Water St., Chicago 1:

How Birds Help Us (400-ft, b-w and color). A small farm boy wonders if all birds are pests. His father explains how chickens, turkeys, wild ducks, barn swallows, woodpeckers, owls and other birds control the insects and rodents that are harmful to the farmer. Primary children will enjoy and understand this science film. $55 and $100.

How Insects Help Us (400-ft, b-w and color). Billy believes that most insects are pests. He learns that butterflies, honey bees, dragon flies, the praying mantis, and other insects have a service to perform for men and counteract the bad effects of other insect pests. Of interest to primary and intermediate students. $55 and $100.

Where Does Our Food Come From? (400-ft, b-w and color). The son of a small grocery store owner learns how his father gets the dairy products, meat, fruit and vegetables that he sells. The film explains the function of the wholesale market and raises questions concerning frozen foods. Primary social science. $55 and $100.

Fossils, Clues to Prehistoric Times (400-ft, b-w and color). Intermediate and junior high science students will be interested in the processes used to collect, pack, ship, and reassemble fossil remains. Various types of fossils, fossil molds, prints, amber, and remains from tar pits are exhibited. Effective use of models and skeletons of prehistoric animals add to the interest of the film. $55 and $100.

Ancient Orient, the Far East (500-ft, color and b-w). Traces the various factors that have influenced the basic cultures of China, Japan, and India through their art, literature, architecture, music, and religions. Most suitable for the secondary program. $68.75 and $125.

The Maylay Peninsula — People and Products (400-ft, b-w and color) relates the effect of the climate and natural resources to the living customs and activities of the people. Points up the significance of this region when certain critical products are considered and related to world trade. Modern cities are contrasted with rural agricultural and forest areas. Rubber, copra, rice, tea, and

tin production is reviewed. The role of modern education is also emphasized. Good for intermediate and secondary social study classes. $55 and $100.

New England: Background for Literature (400-ft, b-w and color). The various forces found in New England —its rugged and beautiful landscape, early struggles for religious and political freedom, and historical development — are reflected in the prose and poetry of Bryant, Whittier, Emerson, Longfellow, Thoreau, and other literary greats. This film ties together these writers, their area of interest, and selected writings. Will serve as a preface to the study of Early American Literature. $55 and $100.

PAUL HOEFLER PRODUCTIONS, 1122 Kline, La Jolla, Calif.:

Whales and Whaler Men (800-ft, color). A modern whaling vessel, manned by an experienced colorful crew of Norwegian whalers, leaves Durban, South Africa bound for the whaling waters of the Antarctic Ocean. The work of the crew and the preparation of the whale gun is a prologue to the real work of gunning the whale. Three whales are harpooned—each a different specie. The film follows the work of securing the whale, bringing it back tc the whaling station for reduction and rendering it into oil, food, fertilizer, and other by-products. The film is authentic, beautifully photographed, and has high elements of excitement and interest. $190.

Bees and Their Habits (400-ft, color). Identifies the four types of bees that inhabit the hive, explains the division of labor of each type, and reviews the life cycle of the bee and the eventual division of the colony. The anatomy of the bee, along with its food-gathering habits are carefully explained. Color charts contrast the vision response of the bee with the human eye. An explanation is given of how they communicate directions to each other. The film stresses the high degree of social organization that bees practice by instinct. Good for upper elementary, high school, and adult groups. $100.

African Fauna, (400-ft, color), a reissue. The original released 20 years ago has been a consistent best seller. In his new version Hoefler introduces Africa's seven most deadly animals — the hippo, crocodile, African leopard, lion, African buffalo, rhino, and the giant elephant. Unusually fine shots of these magnificent animals in their native habitat gives the viewer a fine insight into their habits. Photography and editing are excellent. $100.

INTERNATIONAL FILM BUREAU, 57 East Jackson Blvd., Chicago 4:

Anger at Work (800-ft, b-w) was produced by the Oklahoma Department of Health and Mental Hygiene. The film centers its attention on a draftsman's office and shows how displaced anger can reduce the efficiency of the individual and set up a chain reaction that influences the behavior of others. Solutions are offered, and the final sequences show how effective they can be. Film is well scripted and designed for adult groups. Price: Apply to distributor.

Colonial Living (600-ft, color) is an excellent portrayal of the homes, customs, and life in a well-established colonial village. Homecrafts such as candle-making, food preparation, and weaving show the self-reliance of these people. Family life and the evening activities create a warm and friendly atmosphere. Suitable for elementary social studies. Will contribute to understanding of early American customs and living conditions. Price: Apply to distributor.

KESTREL PRODUCTIONS, 7962 Melrose Avenue, Los Angeles 46:

Horn of Plenty (800-ft, color) takes the viewer to the large Strathmore Farm near the famous Capistrano Mission. Here dry farming methods are employed and large herds of cattle brought from the open range to the feed lot for fattening. Attention is given to the importance of farm machinery and its care and maintenance. The dependence upon water and the need for diversification is also emphasized. The film is well put together and serves as a fine contrast between a western ranch and the typical Midwest farm. Price: Apply to producer.

YOUNG AMERICA FILMS section of McGraw-Hill Textfilms, 330 W. 42nd St., New York City 36:

Make Your Home Safe (400-ft, b-w). Points up common dangers in homes and the accidents that may occur if carelessness prevails. The film is directed toward the younger school age child and emphasizes the need for thoughtfulness, skill, and care in the elimination of accidents. $50.

Creatures of the Desert (400-ft, b-w) introduces the viewer to the tarantula, desert toad, horned toad, scorpion. black-tailed jack rabbit, kangaroo rat, rattlesnake, ground squirrel, gila monster, and chuckawalla. This film shows how each animal is adapted to the desert environment and the struggle for survival he faces. Intermediate grades and junior-high science students will profit by seeing it. $50.

WALT DISNEY PRODUCTIONS, 16mm Division, 2400 Alameda Ave., Burbank, Calif.:

Those who have followed the "Disneyland" programs on television are familiar with his science feature programs. In all probability you failed to get the full impact of the film due to the absence of color and the interruptions of the commercials. Science teachers should welcome the news that two of these most popular and timely subjects are available in educational versions to schools on long-term leases.

Our Friend the Atom (50-min, color) is the history of man's effort to solve the mysteries of matter and the atom. The film traces this story from the early hypothesis of Democritus to the most recent research in the field of nuclear fission. Disney looks ahead to the future and the possibilities that man has to use this force either for good or for destruction. It has a message for the lay citizen as well as the student and scientist. (10-year school lease $350; available in two parts.)

Man in Space (35 min, color), reviews man's rocket experiments that have extended from the days of the ancient Chinese to the present. The four-stage rocket which launches the satellite is explained as well as the still unsolved problems. The film also analyzes the problems that a manned space machine will create for those making the trip. Excellent technical assistance from Willy Ley, Heinz Haber, and Warner von Braun, is combined with Disney's artistic and technical skill to make this film authentic and interesting to the science-minded individual. 10-year school lease, $300.

DEPARTMENTS

NEWS & VIEWS

OF PEOPLE AND PLACES

UNDERWAY IN TEXAS is a TV series of 26 lessons in teacher education conducted by Arthur H. Moehlman, professor of education history and philosophy on leave from the University of Texas. Teacher permits valid during 1957-58 and renewable for three additional years will be issued by the Texas Education Agency to college graduates employed as teachers on the basis of their enrollment in the course. Sponsor of the *Adventures in Education* series is the Texas Education Agency in cooperation with Texas schools, colleges, and universities.

ACCORDING TO JOHN FLORY, quoted in *Film News* (Summer 1957), an estimated $1.5 billion has been spent for audio-visual equipment in the U. S. since World War II. American business and industry currently own 150,000 16mm sound film projectors representing an expenditure of about $156 million. Government expenditures for film and AV materials is estimated at $31 million; education at $22 million; religious at $13,900,000; civic, social welfare and education at $7,510,000; and health, $5,700,000. Mr. Flory is advisor on non-theatrical films for Eastman Kodak.

A SECOND FILMSTRIP has been produced by the Michigan Historical Center in cooperation with the University of Michigan Audio-Visual Center. *History of Great Lakes Transportation* contains 75 frames, is accompanied by a 34-page illustrated teacher's manual, and sells for $3. Write University of Michigan, Audio-Visual Center, 4028 Administration Building, Ann Arbor. FORD LEMLER, member of AVI's newly appointed editorial board is director of the University of Michigan center.

THE MYSTERY OF J. STANLEY MCINTOSH'S stolen copy of *Visual Instruction in the Public Schools* by Anna V. Dorris has finally been cleared up in the columns of *Ed Screen*. In June Mr. McIntosh wrote in a letter to the editor that his "cherished copy" of Anna Dorris' book was the only book that had ever been stolen from him. In the October issue of *Ed Screen* Lee Cochran replies that the book is where it belongs, in the DAVI archives — a presentation of DAVI President BOB DEKIEFFER in the summer of 1956. Writes LEE COCHRAN: "Bob deKieffer and Stan McIntosh can now try to determine how the book was found at the University of Colorado after all these years."

TECNIFAX CORPORATION has published in booklet form two speeches presented at its 11th Seminar and Workshop in Visual Communication last April. *Technical Presentation: Some Theories and Techniques* is adapted from an address by JOHN BATESON of the Canadian Defense Research Board; *The Option Is Ours* is adapted from a talk on the importance of visuals in group communication by RAY WYMAN, director of audio-visual services at the University of Massachusetts. Both are illustrated. Write Tecnifax Corporation, Holyoke, Mass.

THE COUNTY HALL of exhibits in Gresham, Oregon, was the scene of an instructional materials fair sponsored by the Multnomah County unit of the Oregon Educational Association October 9. Divided into specific subject areas, each exhibit portrayed the development of instruction from kindergarten up to grade 12. Exhibits ranged in size from tiny clay forms to a giant papier maché Paul Bunyan. Children's paintings attracted much attention in the art section and the social sciences displayed an oversized painting of an entire community. More than a year in the planning, the fair was directed by HELEN HARTNESS of Lewis and Clark College and operated by Multnomah County Teachers.

PROFESSIONAL MEMBERS of the NEA headquarters staff met November 24 and 25 at the Woodner Hotel in Washington, D. C. to discuss basic issues facing education in today's society and the role that NEA can play in meeting these issues. The meeting was in the interests of NEA's Expanded Program which began to materialize after NEA delegates voted to increase dues from $5 to $10 last summer. (See page 199 October 1957 AVI.)

In Washington, D. C., the British Ambassador, Sir Harold Caccia (left) accepts the first color print of a new Coronet film, "The Jamestown Colony," from J. M. Abraham, vice-president of the firm. Presentation was made after the film's premiere before hundreds of educators and audio-visual people. In background is Ellsworth C. Dent.

Austrian AV Society

FOUNDED in Austria three years ago to spread AV information and circulate foreign materials, the Osterreichische Gesellschaft fur Audio-Visuelle Erziehung can now boast a membership of 25,000 and a 16-page quarterly called *AVISO*. The former can be accounted for by the fact that the membership of institutional members such as corporations and student unions are listed in their entirety, according to Erich W. Bauer, the society's founder. A more realistic figure, he said, are the some 400 individual members.

Mr. Bauer is currently in this country working in the language laboratory at DePauw University. During a visit to the national office last fall he said that the organization was a result of his studies in the United States under a State Department Scholarship four years ago. He reported that there are now two language laboratories in Vienna; and that slides, filmstrips, and tapes are just coming into their own in his country. There is much interest in tapes, he said.

Austria has a good school radio system, with broadcasts three times weekly. During the past two years feltboards have gained usage. Mr. Bauer hopes to make the society's headquarters a center for international audio-visual materials and offers his magazine to publicize American methods. Persons interested in the exchange of materials and information can write to the society at 15 Schwarz Spanierstrasse, Vienna. (See page 25 for review of *AVISO's* first issue.)

Council on Instruction

A 14-member temporary committee has been appointed to explore the possibility of establishing a new NEA commission or council on instruction. Lyle Ashby, secretary for educational services, explained its purpose thus: "Much excellent work on instruction is being done right now by NEA departments and other NEA units, but that work in the main is specialized. A central body cutting across the entire instructional field, studying instruction from an overall viewpoint, might be the way to greatly strengthen the total effort."

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6 Are both reels mounted on top of projector?	☐ No overhanging reels to present a "traffic hazard." Projector can be set up on any level surface, even the floor.
7 Does it have single drive sprocket?	☐ Eases film stress, because same sprocket controls film entering and leaving projector.
8 Does it have compensating film shoes?	☐ Automatically adjust themselves to varying film thicknesses. Guard against splices catching.
9 Does it have 180° swing-out lens?	☐ Facilitates threading and cleaning of both aperture and film channel.
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AV in a Decade of Decision

Editorial | *Anna L. Hyer*

THAT THE NEXT DECADE will be a critical one for education few people will dispute. The advent of Sputniks I and II have brought forth a rash of magazine articles, columnist's editorials, and several books on Russian education of which *Education in the USSR* from the U. S. Office of Education is a recent sample. The public is now demanding quality and speed in education, especially in mathematics and science. It is estimated that over 1000 education-science bills are being prepared for attention of Congress.

In this New Year's editorial it seems appropriate to look briefly at some of the pressure points in education and their implications for the communication field.

A considerable amount of information is known about Russian education. Its goal is clearly to prepare individuals for service to the state. In contrast to the European system, the Russians have accepted the American concept of free education for all and are successfully putting it into practice. Higher education in the Soviet Union is not only free, but most students are paid a salary while attending college. The teacher-pupil ratio is about 17-1, probably the lowest in the world, and teachers have high status and are well paid. William Benton, publisher of Encyclopaedia Britannica, wrote in the May 1956 *NEA Journal* that outstanding professors earn the equivalent of the annual salary of an American industrial corporation president. According to Soviet statistics, the Russians are spending 10 percent of their national income on education as opposed to about 3 percent in the U. S.

Following free nursery and kindergarten, Russian children enter a ten-year public school. Probably about 45 percent of the curriculum is devoted to science and mathematics. We are told this includes ten years of math, six of biology, five of physics, and four of chemistry. All children learn a foreign language (five years), with English being studied by 40 percent of the secondary school pupils and 65 percent of the college students. Russian schools operate six days a week, ten months a year, with plans for a 12-month school term.

Much can be read in our press about the results the Russians are achieving, but to date I have seen almost nothing about the methods and materials used to achieve these results. However, a report on "Visual Methods in the Soviet Union" was carried in *Visual Education*, a British magazine, in January 1957. This report cited that in 1956 about 200 science films alone were produced. Prints of *all* films produced are deposited in a great number of schools. In areas more sparsely populated, regional libraries are established. The schools with their own film libraries have classrooms that can be "blacked out in a second." Laboratory assistants set up and run the equipment, and the teacher has a remote control panel at the front of the classroom for her convenience. Filmstrips, slides, charts, and tape recorders are widely used.

In light of public recognition of Russia's educational and scientific advances, pressures on educators here at home are certain to mount. This may provide the lever for some much needed curriculum revision. Mathematicians, for example, say that much of the math taught in high schools today is ancient and outmoded. Others are saying that we now have a national emergency and we can no longer depend on state authorities and local school boards to make intelligent decisions concerning curriculum offerings. For example, how many schools could be depended upon to start teaching Russian? Cooperative planning at the national level is suggested by some as an answer.

In this whole area of curriculum revision there is one danger against which all educators should be on guard; namely, that pressure groups may cause undue emphasis to be given to math and science at the expense of foreign languages, social studies, and general human values.

Most of you are familiar with the suggestions for increasing the speed and quality of education—lengthening the school day and year, adoption of new methodology, vast testing programs, early identification of talents and abilities, more rigid curriculum requirements with fewer electives, and others. Certainly much emphasis will be placed on the education of the gifted.

Scholarships for college students, increased salaries for science and math teachers, and federal aid to states are among financial proposals under study, and the perennial question of who should pay for public education continues to be debated. At present, the support of education is distributed somewhat as follows: local units, 55 percent; states, 40 percent; federal government, 5 percent. An important related problem is that of getting some states to increase the size of school units in order to make adequate education economically feasible. More than half of our high schools now have an enrollment of less than 200.

How these proposals are met will have long-range significance for all educators. But what, specifically, do they mean to the audio-visualist? I would like to point out five areas of concern.

1. *Leadership role.* As an educator you have a responsibility to be informed of trends and problems, to evaluate suggested solutions, and to form and communicate considered judgments. In the emergency it will be up to educators to see that values are not compromised unknowingly.

2. *Participation in curriculum planning.* Every change in curriculum content and organization must be reflected in your budgeting, in your se-

(Continued on page 32)

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Decade of Decision

(Continued from page 30)

lection and purchase of materials of instruction, and in utilization procedures. Many new texts and supplemental materials will be written that should be correlated with appropriate audio-visual materials. As interest increases in the non-Western world, there will be a demand for the teaching of Russian, Asian and African history, and other new subject areas. Materials not now in existence will need to be produced and made available.

3. *Communication with the lay public.* In the next few years, education must succeed in the most tremendous public relations job in its history. The public must be shown what adequate education means and what it will cost. Their attitude toward education, teachers, and "egg-heads" in general, must change. Audio-visual materials can play an important part in this task. Many leading educators feel that regardless of surface interest in education, the public is still not willing to pay the price of adequate education.

4. *Application of AV research.* The current interest in "how to teach more and teach it better" provides the most fertile soil possible for the growth of interest in audio-visual materials and techniques. Our research holds some keys that can help break the present bottleneck. We have methods that can speed the upgrading of unqualified teachers.

5. *Establishment of regional and cooperative materials centers.* We in the audio-visual field have a unique opportunity to assist in spreading the concept of the intermediate school unit. Through regional and cooperative AV centers, we can help provide a richer school experience to students in small schools.

Whether we like it or not, we in the United States are in a scientific manpower race, and probably for years to come world conditions will continue to influence what we do in education. This decade of educational ferment is undoubtedly one of opportunity for the audio-visual field. It's up to us to rise to the challenge. So — in jet-age terminology — let's get "our afterburners lit."

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Swedish Radio—

(Continued from page 13)

When this teaching method was first introduced it was partially based on correspondence school principles. Written tests were sent in every month from the schools to the Swedish Radio where a staff of teachers corrected the papers. Today the radio teachers only make the test papers. These are sent out to the school and are marked by the classroom teachers themselves. A written guide to insure correct marking of the papers is prepared by the radio producers and is enclosed in shipments to the schools.

Swedish school authorities are now considering the possibilities of using a combined radio and correspondence method on a larger scale to solve some of the problems of high school education in sparsely settled areas. For various reasons it will be difficult to get a sufficient number of teachers needed for the upper forms of what is known as the "comprehensive schools."

As has been the case in many Anglo-Saxon countries correspondence schools in Sweden enjoy a very fine reputation. They have helped many young people to acquire knowledge that would otherwise have been denied them. But these students have had energy and perhaps also intelligence above the normal.

When it comes to fitting correspondence studies into the ordinary school system, the radio medium may prove helpful to counterbalance the somewhat abstract quality that is characteristic of correspondence instruction. The correspondence school expert reaches his pupils by mail from his desk in the city. The radio teacher speaks from his studio direct into the classroom. The former can constantly check the progress of his pupils and give personal advice. The latter is present in the classroom twice a week, spiritually if not physically.

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